CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF CITY PLANNING

DRAFT

84.432E

235 PINE STREET

OFFICE BUILDING

ENVIRONMENTAL IMPACT REPORT

PUBLICATION DATE: JANUARY 24, 1986

PUBLIC HEARING DATE: FEBRUARY 27, 1986

PUBLIC COMMENT PERIOD: JANUARY 24, 1986 TO FEBRUARY 27, 1986

WRITTEN COMMENTS SHOULD BE SENT TO
THE ENVIRONMENTAL REVIEW OFFICER
50 McALLISTER STREET, SIXTH FLOOR, SAN FRANCISCO, CA 94102

City and County of San Francisco
Department of City Planning

450 McAllister Street
San Francisco, CA 94102

ADMINISTRATION
(415) 558 - 5111 / 558 - 4656
CITY PLANNING COMMISSION
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IMPLEMENTATION / ZONING
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DATE: January 24, 1986

TO: Distribution List for the 235 Pine Street Project Draft EIR

FROM: Barbara W. Sahm, Environmental Review Officer

RE: Request for the Final Environmental Impact Report for the 235 Pine Street Project

This is the draft of the Environmental Impact Report for the 235 Pine Street Project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document titled "Summary of Comments and Responses" which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the draft will automatically receive a copy of the Comments and Responses document along with notice of the date reserved for certification (; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the City Planning Commission in an advertised public meeting and certified as a Final EIR.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them.

If you want a copy of the Final EIR, please so indicate in the space provided on the next page and mail the request to the Office of Environmental Review within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.

PLACE
POSTAGE
HERE

Department of City Planning
Office of Environmental Review
450 McAllister Street, 6th Floor
San Francisco, CA 94102
Attn: Ms. Carol Roos, EIR Coordinator
84.432E - 235 Pine

CUT ALONG DOTTED LINE

RETURN REQUEST REQUIRED FOR FINAL ENVIRONMENTAL IMPACT REPORT

REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

To: Department of City Planning,
Office of Environmental Review

Please send me a copy of the Final EIR.

Signed: _____

Print Your Name and Address Below

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF CITY PLANNING

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235 Pine Street office
building : [draft]
1986.

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INTRODUCTION

This introduction explains the process of tiering environmental impact reports, and describes tiering in relation to this Draft Environmental Impact Report for the proposed 235 Pine Street project.

TIERED ENVIRONMENTAL IMPACT REPORT

Where a prior environmental impact report (EIR) has been prepared and certified for a program, plan, policy or ordinance, the lead agency for a later project that meets specified requirements must examine significant effects of the later project on the environment, with exceptions, by using a tiered report whenever feasible as determined by the lead agency. (See California Public Resources Code, California Environmental Quality Act (CEQA), Sections 21093 and 21094, including amendments effective January 1, 1986.)

The law states the Legislative intent, finding and declaring that:

> tiering of environmental impact reports will promote construction of needed housing and other development projects by 1) streamlining regulatory procedures, 2) avoiding repetitive discussions of the same issues in successive environmental impact reports, and 3) ensuring that environmental impact reports prepared for later projects which are consistent with a previously approved policy, plan, program, or ordinance concentrate upon environmental effects which may be mitigated or avoided in connection with the decision on each later project; [and] that tiering is appropriate when it helps a public agency to focus upon the issues ripe for decision at each level of environmental review and in order to exclude duplicative analysis of environmental effects examined in previous EIRs.

The law directs that where a prior EIR has been prepared and certified as noted above, the lead agency shall examine significant effects of the later project on the environment by using a tiered EIR, except that the report on the later project need not examine those effects which were either mitigated or avoided as a result of the prior EIR, or, examined

at a sufficient level of detail as a result of the prior EIR to enable those effects to be mitigated or avoided by site-specific revisions, the imposition of conditions, or other means in connection with the approval of the later project.

235 PINE STREET

A tiered environmental impact report has been prepared, and is presented herein, for the proposed 235 Pine Street project pursuant to Sections 21093 and 21094 of CEQA. This EIR is tiered from the EIR for the Downtown Plan (EE81.3, Final EIR certified October 18, 1984). The cumulative impacts of the development forecast in the downtown C-3 districts of San Francisco to the year 2000, including this project, are addressed in the Downtown Plan EIR. That cumulative analysis is not repeated in the EIR for this project.

The EIR for 235 Pine Street identifies the project portion of the cumulative impacts forecast in the prior EIR. (The Downtown Plan EIR may be examined at the Department of City Planning, 450 McAllister Street, Sixth Floor, San Francisco; the San Francisco main library; and various branch libraries.)

The 235 Pine Street EIR analyzes project-specific impacts. It discusses potentially significant effects of the project that were not examined in the Downtown Plan EIR and includes applicable mitigation measures for site-specific effects.

I. SUMMARY

A. PROJECT DESCRIPTION

The project sponsor, London & Edinburgh Trust (LET) proposes to construct a 350-ft.-tall, 25-story (plus basement) office building. The project architect is Skidmore, Owings & Merrill, San Francisco.

The 10,220-sq.-ft. site is Lot 15 of Assessor's Block 267 (see Figure 1, p. 14). The site fronts Pine St. between Battery and Sansome Sts. The site contains a three-story (plus basement) parking garage with 217 valet parking spaces (cars are currently parked on five levels: basement, floors one through three, and on the roof). The garage would be demolished. Six employees are currently on the site.

The 350-ft.-tall project would be a 25-story building including a 25-ft.-tall mechanical penthouse, plus one subsurface level. As calculated under the Downtown Plan, the building would contain about 147,700 gross sq. ft. of floor area, excluding all non-office area. This would result in a Floor Area Ratio (FAR), the ratio of office floor area (excluding retail, child care, parking and mechanical space) to site size, of about 14.5:1 for the 10,220-sq.-ft. development site. Exclusion of parking area in excess of seven percent of the floor area (project parking would be about 14%) from the FAR calculation assumes that it would be replacement short-term parking which may be approved by the Planning Commission pursuant to Section 309. Pedestrian and vehicular access to the building would be from Pine St. The basement level would contain storage, mechanical space and a trash compactor. The ground floor would contain lobby, retail and child care areas; the second floor would be a service level with vehicle loading and valet parking drop-off and pick-up; floors three through six would contain parking (the sixth floor would contain some mechanical space); floors seven through 24 would be office. The 25th level penthouse would be a mechanical floor.

The building would include about 147,700 gsf of office space, 2,500 gsf of retail and child care space, 21,530 gsf of mechanical and storage space and about 20,700 gsf (excluding

ramps) of short-term parking space (about 60 valet spaces), and one loading space. Total net changes in floor area for the site would be a net increase of about 147,700 sq. ft. of office, a net increase of 2,500 sq. ft. of retail and child care, and a net increase of about 700 sq. ft. of parking area, with a net decrease of about 157 parking spaces. (The increase in parking area but a decrease in the number of spaces is due to the inherent inefficiency of high-rise buildings with a large building core and increased ramp and maneuvering space.)

The project proposes open space off-site in the form of monetary contribution by the sponsor to develop Commercial St. from Sansome to Montgomery Sts., as a part-time pedestrian street.

The project would incorporate about 55,700 sq. ft. of transferred development rights (TDR) from one (or more) of three sites under consideration. The FAR over preservation and development lots would be less than, or equal to, 9:1. The project would comply with height and bulk controls for the site. It would require an exception from the separation of towers setback requirements of the Downtown Plan and consideration of parking within the project as replacement short-term parking, both allowable under section 309 of the Planning Code. Alternatively, the project could require Conditional Use authorization for the proposed parking in excess of seven percent of floor area (about 10,340 gsf).

Demolition of the existing building, scheduled to begin in mid-1986, would take about four weeks. Construction would then continue for 76 weeks, a total expected 20-month construction period, until anticipated project completion and initial occupancy in late 1987.

B. MAIN ENVIRONMENTAL EFFECTS

LAND USE AND ZONING

The site is in the C-3-0 (Downtown Office) Use District, within the 450-S Height and Bulk District. The project would replace a parking garage with office, retail, child care and parking uses. The proposed office and retail uses would be similar to those in the vicinity of the project, which is characterized by office buildings with ground-floor banking and

office-support retail facilities. The proposed parking use would replace the parking now on the site.

As required by the Downtown Plan, the project would comply with the height, average-floor-sizes and length and diagonal dimension requirements, would provide open space by contribution to the improvement of Commercial St. between Sansome St. and Montgomery St., would provide art work, and would comply with child care requirements.

The project would require an exception to the separation of towers setback requirement, as provided for in Section 132.1(c)2B and 2C of the Planning Code, subject to approval under Section 309, and consideration by the Planning Commission of the proposed parking as replacement short-term parking, under Section 309.

URBAN DESIGN

The building design would be a three-part composition: the base (ground-floor, service level and parking levels); a middle shaft (floors seven through 20); and a top (levels 21 through 25 and a mechanical penthouse). The base would be similar in scale to the Donahoe Building to the east and would relate to the existing street wall height. Setbacks would be located at the first, fifteenth and eighteenth office floors; the mechanical roof level would be articulated, as called for in the Downtown Plan. The building would be clad in medium value granite.

The 25-story building would be taller and more visible than most existing structures on the project block, such as the Hong Kong Bank and Donahoe buildings both adjoining the site; it would be about 20 ft. shorter than the Shell building, southeast of the project site. The project would not block any scenic views now observed from public areas. It would block some views of the upper portion of the Shell building from points on Pine St. in the project vicinity. It would block some views from surrounding buildings, including the Hong Kong Bank, 345 California, and the Shell building.

SHADOW AND WIND

The project would cast no new shadow on any Recreation and Parks Department property during the hours defined by Proposition K, and would thus comply with the Park Shadow

Ban ordinance. The project would cast new shadow on streets, sidewalks and roofs in the project area.

The project would add new shadow to the second level garden terrace of the Hong Kong Bank building. (The terrace abuts the project site on the west.) The project would entirely cover the terrace with new shadow at noon in June. Mid-morning in March and September, about 85% of the terrace is shaded by existing buildings; the project would complete the shading of the terrace at these times. The terrace is private open space, used by second floor tenants of the bank building only. It is used as a visual amenity, and is not used for sitting. The project would not shade the private roof garden of the new 130 Battery building.

A wind tunnel test of the project area indicates that existing winds do not exceed the 11 mph pedestrian comfort criterion established in the Downtown Plan. The project would cause wind speeds to increase at six of the 16 locations monitored (by between one and four mph), to decrease at six locations (by between one and two mph), and to remain the same at four locations. With the project in place, winds in the vicinity would not exceed the 11 mph pedestrian comfort criterion. There are no areas where people sit in the project vicinity and, therefore, the seven mph sitting comfort criterion does not apply.

CULTURAL RESOURCES

The project site is located along the 1849 San Francisco waterfront area; research indicates that it is unlikely that ship remains would be found on the site. Archaeological remains from the Gold Rush period could exist on the project site. Resources could include architectural remnants, trash pits, privies and other scattered cultural objects. Such a find could be considered of potential archaeological and historical significance.

TRANSPORTATION

A sidewalk detour and curb lane closure on Pine St. would be necessary during project construction (about 18 months). Demolition and excavation (separate phases) would each generate an average of 10 truck round trips per day. Construction truck traffic would be limited to the period between 9:00 a.m. and 3:30 p.m. Construction traffic and closure of

the curb lane on the south side of Pine St. in front of the site would slow traffic movements, including those of Muni buses using Pine St.

The project would generate about 3,000 net new person trips per day. About 460 new outbound trips would occur during the p.m. peak period, 290 of these during the p.m. peak hour.

The project would provide about 60 short-term valet parking spaces and would result in a net decrease of about 157 spaces (the existing 217 valet spaces on the site are currently fully occupied). Estimated equivalent daily parking demand from the project would be about 123 spaces, resulting in an unmet parking demand as a result of the project of about 280 spaces (123 space project demand plus 217 existing spaces equal 340 spaces, minus 60 spaces with project equals 280 spaces).

The proposed project would generate about 135 new pedestrian trips on sidewalks and crosswalks in the vicinity of the site during the noon 15-minute peak period and about 95 new pedestrian trips during the p.m. 15-minute peak period. These increases would not change the pedestrian levels of service of the sidewalks and crosswalks.

The project would add about 125 outbound trips to Muni, 70 outbound trips to BART, and about 60 new outbound trips to other transit agencies during the p.m. peak period. The project would generate an annual cost deficit to Muni of about $27,700, which would be less than the project's contributions to the General Fund, the Transit Development Impact Fee, and sales tax revenues. The project would result in an annual net operating deficit to BART of about $118,000. BART's operating deficit per passenger is likely to decline in real terms as planned service improvements become operational in the future.

The EIR for the Downtown Plan (EE81.3, Final EIR certified October 18, 1984, available for review at the Department of City Planning, the main San Francisco library and various branch libraries) forecast employment and development in the downtown C-3 districts to the year 2000, and evaluated the impacts of this forecast employment and development. Project effects fall within this forecast. The summary statements below, and those in the Impacts Chapter regarding cumulative development, are drawn from that EIR. The lengthy and detailed analysis presented in the prior EIR will not be repeated in this EIR for the 235 Pine Street project. The relevant material in the Downtown Plan EIR is incorporated by reference in the appropriate section of the EIR, by topic.

The transit demand from the project would represent about 0.1% of the total transit demand in the year 2000. Cumulative development under the Downtown Plan to the year 2000 in conjunction with planned capacity increases of transit carriers would be expected to cause the following changes in transit levels of service during the peak period: Muni Northwest Corridor, E to D; BART Transbay, F to E; AC Transit, C to D; Golden Gate Ferry, B to A; Tiburon Ferry, A to B; and Caltrain, B to C.

With cumulative development by the year 2000, sidewalk and crosswalk operations would be in the impeded range for all locations studied for the project except for the Pine St. sidewalk, which would be in the unimpeded range.

Cumulative development, including that from the proposed project, by the year 2000 would be expected to worsen existing Level of Service (LOS) E conditions at the intersection of Mission and Beale Sts. to LOS F, and worsen existing LOS C at the intersection of Clay and Battery Sts. to LOS D. Project traffic alone would not cause the LOS at either intersection to change.

The project would represent about 0.1% of total outbound regional auto demand on major auto corridors (bridges and freeways) in the year 2000.

The C-3 District would generate demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent about 0.2% of the total demand from the C-3 District. The parking supply has been assumed to be about 51,000 spaces. There would be a parking deficit of about 6,000 spaces in the year 2000 if vehicular demand occurs as projected. Alternatively, if the goals of the Downtown Plan are achieved, total parking demand in the year 2000 would increase by about six percent over 1984 and there would not be a parking deficit.

The City Planning Code would require, and the project would provide, one loading space for the project. It would be located on the service (second) level of the building.

AIR QUALITY

Project-related vehicular traffic would add to cumulative regional pollutant emissions. Project-related traffic would contribute about one percent of the total incremental emissions resulting from C-3 development projected in the Downtown Plan EIR. Emissions of total suspended particulates (TSP) generated by the project and cumulative development would increase TSP concentrations, which could increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility.

Project emissions alone would not cause any standards to be violated. Currently, the eight-hour CO standard is estimated to be violated at the intersection of Beale and Mission Sts. However, local CO concentrations are predicted to be less in 2000 than in 1984, and would not violate the standards at Beale and Mission Sts., because the effects of emission controls on new vehicles would offset increases in traffic volumes and congestion. Cumulative downtown development is projected by the Downtown Plan EIR to result potentially in violations of the eight-hour CO standard at the Brannan and Sixth Sts. intersection.

GROWTH INDUCEMENT

Increases in downtown office space from the proposed project would contribute to growth of local and regional markets for housing, goods and services. Although employment growth would not be reflected directly in increases in demand for housing and City services to residents, it is expected that some downtown workers would want to live in San Francisco, intensifying the demand for housing, retail goods and services. The project would be an infill office project in the financial district.

C. MITIGATION MEASURES

Major measures that would mitigate potentially significant environmental effects include the following:

MEASURES PROPOSED AS PART OF THE PROJECT

- The project sponsor would contribute funds for maintaining and augmenting transportation services in an amount proportionate to the demand created by the project, as provided by the Board of Supervisors Ordinance Number 224-81. Should said Ordinance be declared invalid by the courts, the project sponsor has agreed to participate in any subsequent equivalent mitigation measures adopted by the Planning Commission or the City in-lieu thereof, which would apply to all projects similarly situated.

- During the construction period, construction truck movement would be permitted only between 9:00 a.m. and 3:30 p.m., to minimize peak-hour traffic conflicts and to accommodate queueing of Muni buses prior to the peak hours. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering of the Department of Public Works, the Fire Department, Muni and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. To minimize cumulative traffic impacts due to lane closures during construction, the project sponsor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction or later become known.

- The project sponsor shall: 1) participate with other project sponsors and/or the San Francisco Parking authority in undertaking studies of the feasibility of constructing an intercept commuter parking facility in a location appropriate for such facility to meet the unmet demand for parking for those trips generated by the project which cannot reasonably be made by transit, and 2) participate with other project sponsors and/or the Municipal Railway in studies of the feasibility of the establishment of a shuttle system serving the project site and the parking facility.

- As recommended by the Environmental Protection Element of the San Francisco Master Plan, an analysis of noise reduction requirements would be prepared for the project sponsor, and recommended noise insulation features would be included as part of the project.

- The project sponsor would require that the construction contractor predrill holes for piles, in order to minimize noise and vibration from pile driving. The actual pounding from pile driving would occur during a five- to eight-minute span per pile.

MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES

- Through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP), PG&E could coordinate work schedules with other utilities requiring trenching, so that street disruption would take place at off-peak hours and on weekends, and at the same time the street would be opened for construction of the project.

- The City could implement the transportation improvements described in the Downtown Plan. Cumulative transportation impacts within San Francisco would be reduced by the improvements, and, to the extent that San Francisco could influence transportation improvements recommended by the Plan for areas outside the City, cumulative regional impacts caused by downtown growth would also be reduced.

D. ALTERNATIVES TO THE PROPOSED PROJECT

ALTERNATIVE A: NO PROJECT

This alternative would entail no change to the site. The proposed project would not be built there. The existing site building could be retained.

This alternative could result in the development of other office space, possibly a high-rise building comparable to the project, at another location. Alternative development within the San Francisco downtown area would result in some of the same (or similar) impacts as described for the project. The effects of development would depend largely on the location chosen and cannot be determined accurately. This alternative would preserve the option to develop a similar or different type of building on the site in the future.

This alternative was rejected by the project sponsor because it would not use the development potential of the site.

ALTERNATIVE B: NO TRANSFER OF DEVELOPMENT RIGHTS, 9:1 FAR

This alternative considers a building with no Transfer of Development Rights (TDR), with an FAR of 9:1, representing the basic allowable on-site FAR. In design, the building would have fewer setbacks than the project. This alternative would include about 92,000 sq. ft. of office space, compared to 147,700 with the project. Retail and mechanical space would be the same as with the project, and located in the same areas. Parking would be provided on floors three through six, as for the project. This alternative would satisfy all Downtown Plan requirements including on-site publicly visible art work, open space (through in-lieu fee), and child care. The design of this alternative would be a scaled down version of the proposed project; it would be reduced in height, from about 350 ft. to about 280 ft.

Wind effects would be similar to those of the proposed project. Transportation, air quality and energy effects would be about 40% less than with the project. Shadow effects would be less, due to the lower height. The alternative would provide employment for about 360 employees, compared with about 600 employees for the proposed project.

The sponsor has rejected this alternative because it would not provide for the development potential permitted under the Downtown Plan, and would not preserve architecturally significant buildings through the use of TDR.

ALTERNATIVE C: NO PARKING

This alternative would have no parking spaces; other uses, building dimensions and floor areas would be as for the project. The portion of the building which would be a service level, and parking levels in the project (floors 2 to 6) would be open forming a high lobby; the develop feels he could not market these lower floors as office without views.

All impacts of this alternative would be as for the project, other than the impact on local intersections. The project would result in a decrease in on-site parking, thereby reducing traffic from the site at local intersections. This alternative with no on-site parking would result in even less traffic at local intersections. The sponsor has rejected this alternative because he feels the short-term parking proposed with the project would be an asset to the building.

II. PROJECT DESCRIPTION

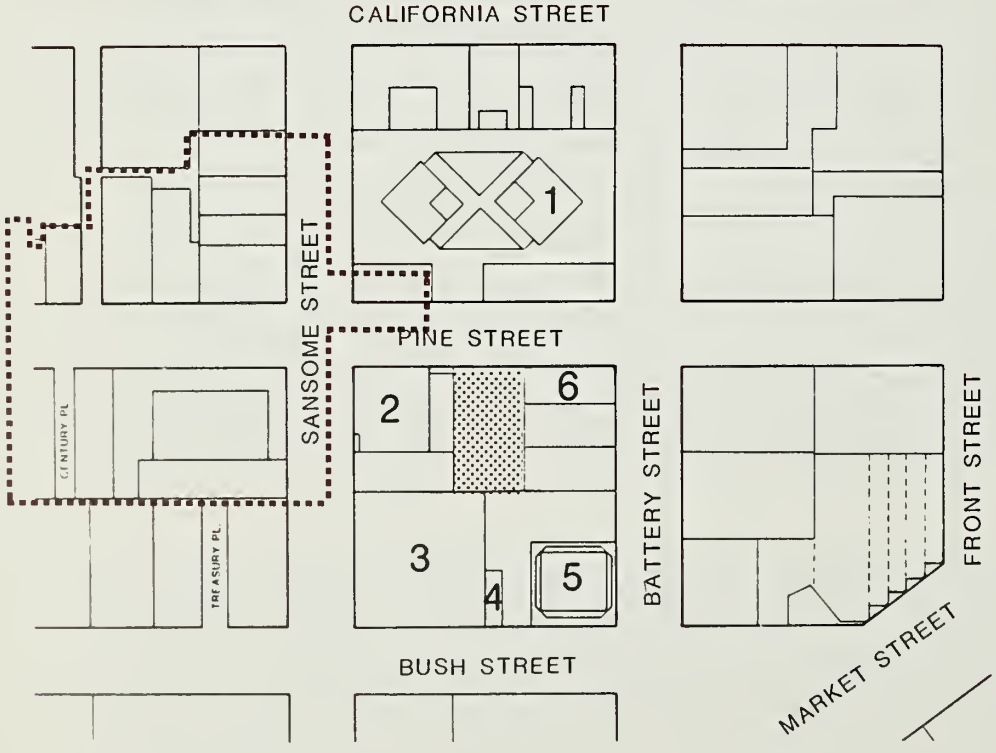
A. PROJECT SPONSOR'S OBJECTIVES

London & Edinburgh Trust (LET) proposes to construct a 25-story, 350-ft.-tall office and retail building with short-term parking on Pine St. between Battery and Sansome Sts. The project architect is Skidmore, Owings & Merrill. The project sponsor's objectives are to develop high-quality office and retail space and provide replacement short-term parking at a prime location in the center of the Financial District.

B. PROJECT LOCATION

The proposed project would be located at 235 Pine St., between Battery and Sansome Sts. in the City and County of San Francisco, and would occupy Lot 15 of Assessor's Block 267. Assessor's Block 267 is bounded by Pine St. on the north, Battery St. on the east, Bush St. on the south and Sansome St. on the west (see Figure 1, p. 14). The 10,220-sq.-ft. site fronts the southern side of Pine St., and is between the Hong Kong Bank Building and the Donahoe Building. Across Pine St., the 345 California St. Building is under construction. The Shell, Adam Grant and Heineman Buildings face Bush St. on the southern half of the project block. The project would replace a three-story (plus basement) concrete 217 space parking garage (cars are currently parked on five levels: basement, floors one through three, and the roof). There are currently six employees in the garage.

The site is in the C-3-0 (Downtown Office) Use district. The basic Floor Area Ratio (FAR) is 9:1. The 450-S Height and Bulk District for the site allows a maximum height of 495 ft., including an optional upper tower extension of 10% of building height. The "S" bulk controls apply to four parts of a new building: base, lower tower, upper tower and upper tower extension. For the S-bulk district, the general principle is reduced bulk with increased height. In the S district, the maximum length and maximum diagonal



LEGEND:

- PROJECT SITE (Assessor's Block 267, Lot No.15)
1. 345 CALIFORNIA
2. HONG KONG BANK BUILDING
3. ADAM GRANT BUILDING
4. HEINEMAN BUILDING
5. SHELL BUILDING
6. DONAHOE BUILDING
- PINE/SANSOME CONSERVATION DISTRICT

0 100
FEET

FIGURE 1
PROJECT LOCATION
235 PINE STREET

SOURCE: ESA

dimensions of the lower tower are 160 ft. and 190 ft., respectively. The maximum average floor size for the lower tower is 17,000 sq. ft., and the maximum floor size is 20,000 sq. ft. For the upper tower, the bulk controls are: a maximum length of 130 ft., a maximum average diagonal measure of 160 ft., a maximum average floor size of 12,000 sq. ft., and a maximum floor size of 17,000 sq. ft. Allowable exceptions to these bulk maximums are provided in Sections 270 and 272 of the Planning Code, subject to approval under Section 309. The project would comply with all height and bulk requirements and would not need any exceptions.

The project would require an exception from the required 15-ft. setback from interior property lines, or center of street specified in Planning Code Section 132.1(c) Separation of Towers. Exception to the setback requirement would be permitted in accordance with the provisions of Section 309 under Section 132.1 subsections (c)2B and (c)2C.

C. PROJECT CHARACTERISTICS

Project characteristics are summarized in Table 1. The 350-ft.-tall project would be a 25-story building, including a 25-ft.-tall mechanical penthouse plus one subsurface level. As calculated under the Downtown Plan, the building would contain about 147,700 gross sq. ft. of floor area, excluding all non-office area. This would result in a Floor Area Ratio (FAR), the ratio of office floor area (excluding retail, child care, parking and mechanical space) to site size, of about 14.5:1 for the 10,220-sq.-ft. development site. Exclusion of parking area in excess of seven percent of the floor area (project parking would be about 14% of the gross floor area of the building) from the FAR calculation assumes that it would be replacement of short-term parking which may be required at the discretion of the Planning Commission pursuant to Section 309. Pedestrian and vehicular access to the building would be from Pine St. The basement level would contain storage, mechanical space and a trash compactor. The ground floor would contain lobby, retail and child care areas; the second floor would be a service level with vehicle loading and valet parking drop-off and pick-up; floors three through six would contain parking (the sixth floor would contain some mechanical space); floors seven through 24 would be office. The 25th level penthouse would be a mechanical floor, with a mechanical penthouse above.

TABLE 1: PROJECT CHARACTERISTICS

NUMBER OF STORIES OF NEW CONSTRUCTION/a/		HEIGHT AND BULK MEASUREMENTS (ft.) AND FAR	Proposed Project	Allowable
Retail/Lobby/ Child Care	1	Height	350	450 /b/
Service	1	Length (lower tower):	130	160
Parking	4	Length (upper tower):	130	130
Office	18	Diagonal (lower tower):	145	190
Mechanical	1	Diagonal (upper tower):	145	160
Total Stories	25			

SITE SIZE: 10,220 sq. ft. Basic FAR/c/: 14.5:1/c/ 9:1 plus TDR/c/ up to 18:1

PROPOSED FLOOR AREA OF NEW CONSTRUCTION	PROPOSED PROJECT Area Applicable To FAR (gsf)	Total Gross Floor Area (gsf)
Basement Mechanical and Storage	0/d/	10,050
Lobby, Retail and other Ground Floor Uses	0/d/	10,050 /f/
Service	0/d/	10,050
Replacement Short-Term Parking	0/e/	35,175 /g/
Offices	147,700	147,700
Mechanical (6th and 25th Floors)	0/d/	11,480
TOTAL	147,000	224,505

/a/ Excluding the basement level, containing mechanical equipment and building storage.
/b/ The project site is located in a 450-S Height and Bulk District. Under Planning Code Section 263.5, additional height of up to ten percent (495 feet) may be allowed, provided the volume of the upper tower extension (above 450 feet) is reduced.
/c/ To permit the FAR on the development site to exceed 9:1, about 55,700 gross sq. ft. of transferable development rights (TDRs) would be transferred from an as yet unidentified site, under Section 128 of the City Planning Code. The Floor Area Ratio (FAR) of the combined development and preservation lots would be less than 9:1.
/d/ Under Section 102.8(b)12-13, gross floor area in the C-3-0 district is defined to exclude convenience, retail and personal service and pedestrian circulation and building service space located on the ground-floor and mezzanine levels (not to exceed 75% of ground-floor interior and open space areas), and mechanical and building storage space.
/e/ Under Section 204.5(c) of the Code, parking area equalling seven percent of the gross floor area would be accessory parking; any remaining gross sq. ft. of parking would be applicable to the FAR. However, Section 102.8(b)16 excludes required short-term replacement parking pursuant to Section 309, from the FAR calculation.
/f/ The project would include about 2,500 gross sq. ft. of retail and child care space on the ground floor.
/g/ With entry and exit ramps excluded, there would be 20,700 gross sq. ft. of parking space.
SOURCE: Environmental Science Associates, Inc., and Skidmore, Owings and Merrill

The building would include about 147,700 gsf of office space, 2,500 gsf of retail and child-care space, 21,530 gsf of mechanical and storage space (including 10,050 gsf in the basement, 5,025 gsf on the sixth floor and 6,455 gsf in the mechanical penthouse) and about 20,700 gsf of short-term parking space (about 60 valet spaces) and one loading space. Total net changes in floor area for the site would be a net increase of about 147,700 sq. ft. of office, a net increase of 2,500 sq. ft. of retail and child care, and a net increase of about 700 sq. ft. of parking area, with a net decrease of about 157 parking spaces. (The increase in parking area but a decrease in the number of spaces is due to the inherent inefficiency of high-rise buildings with a large building core and increased ramp and maneuvering space.)

The project would use about 55,700 gsf of transferred development rights (TDR). The project sponsor has obtained development rights (in excess of those required for the proposed project) from three buildings under his control: 240 California St. (Tadich's Grill - Buich Building); 79 New Montgomery and 251 Front (DeBernardi's - Royal Exchange). (All three are rated Category I in the Downtown Plan.) The overall FAR for the development and contributory lots would be 9:1 or less.

The project would incorporate art as required by the Downtown Plan, and would provide its required open space (2,950 sq. ft.) off-site by contribution to develop Commercial St. between Sansome and Montgomery Sts.

The project would be built to property lines at the base (to a height of 84 ft.); it would be set back from all property lines by about five ft. above the base. Above 84 ft., the tower would project straight up to, and including, the 24th floor. At the 25th mechanical level, the four corners of the building would be chamfered (cut diagonally away from the edge). On the east and west faces, beginning at the seventh floor two rectangular indentations would extend vertically up the sides of the building to the 23rd level, where three larger indented rectangular bays would extend vertically to the lower half of the mechanical penthouse (25th) level. Within each indented rectangle, triangular projections would extend vertically up the building face. At the center of the Pine St. elevation a single indented bay with central triangular projections would extend from the 23rd floor to the 24th floor. Floor plans and elevations are shown in Figures 2 to 9, pp. 18 to 25.

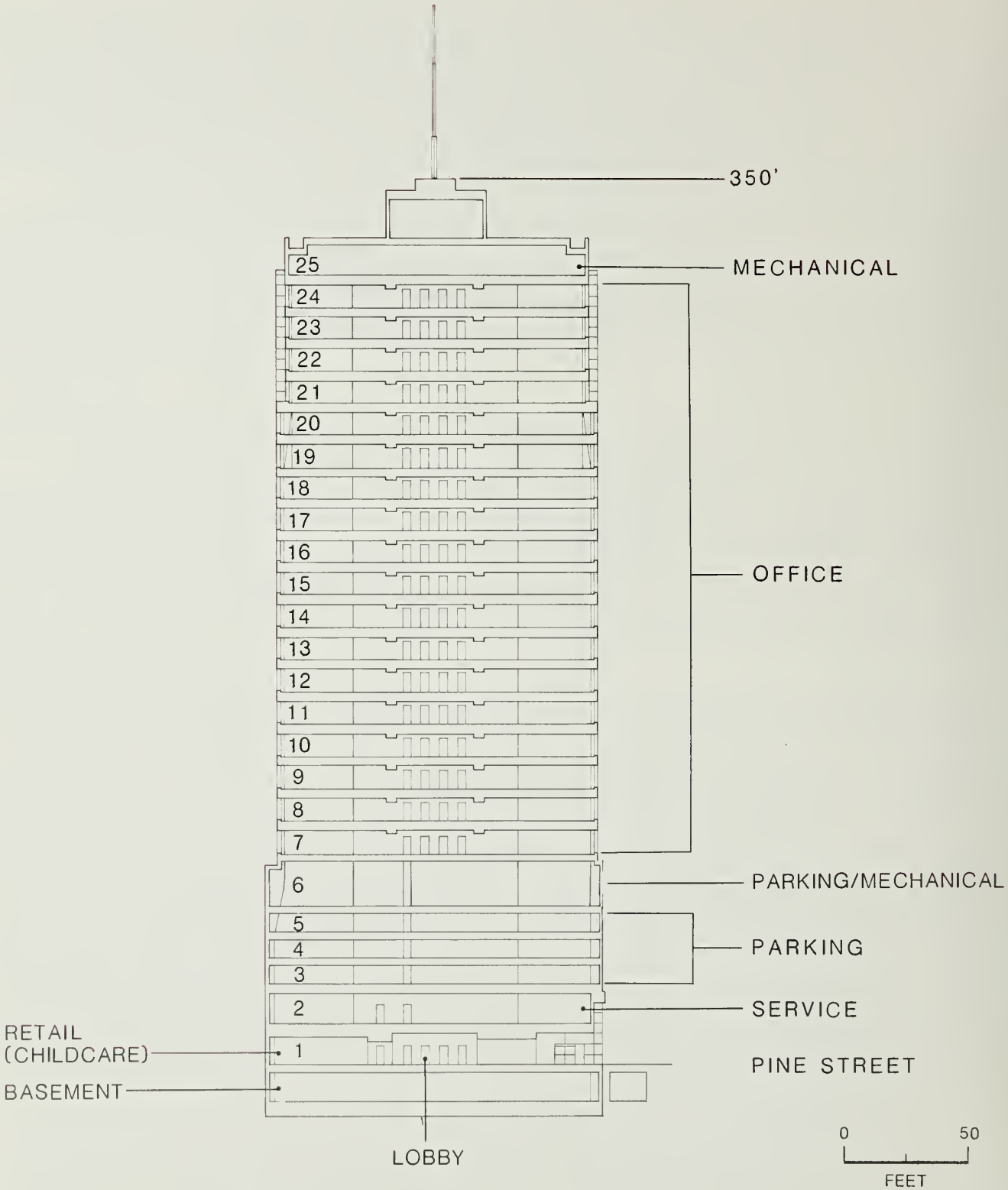


FIGURE 2
235 PINE
BUILDING SECTION

SOURCE: SKIDMORE, OWINGS & MERRILL

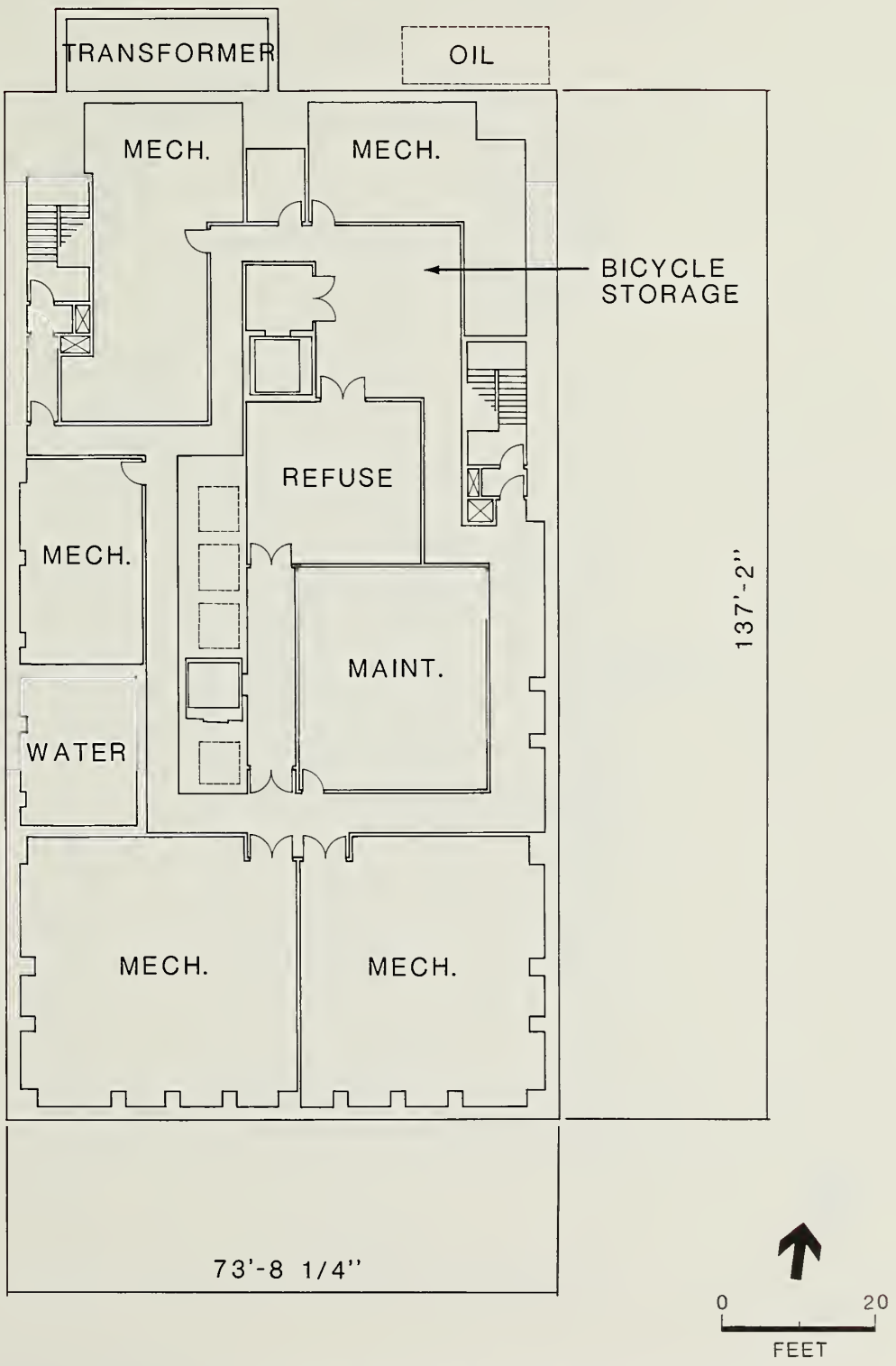


FIGURE 3
235 PINE
BASEMENT LEVEL PLAN

SOURCE: SKIDMORE, OWINGS & MERRILL

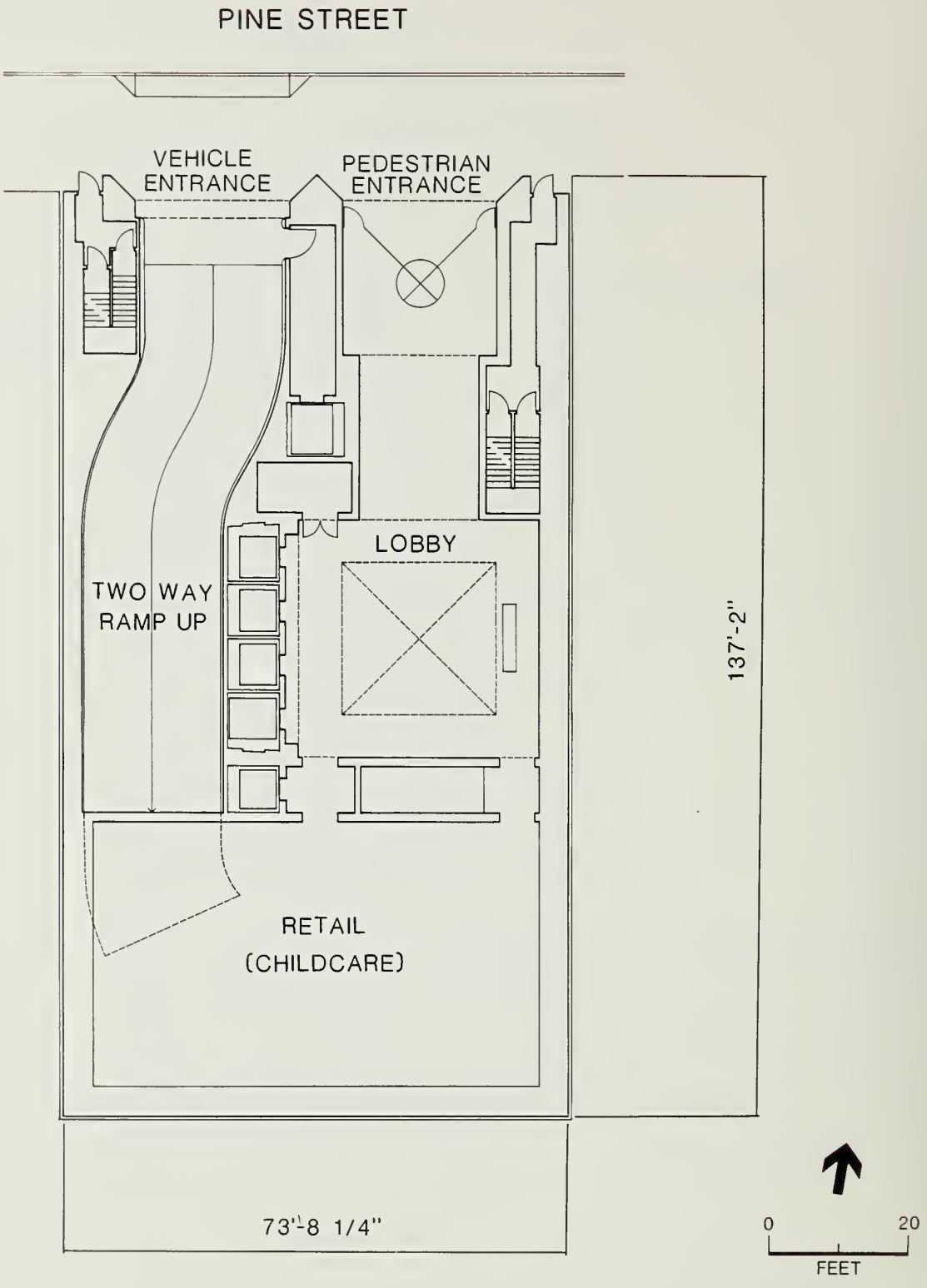


FIGURE 4
235 PINE
GROUND FLOOR PLAN

SOURCE: SKIDMORE, OWINGS & MERRILL

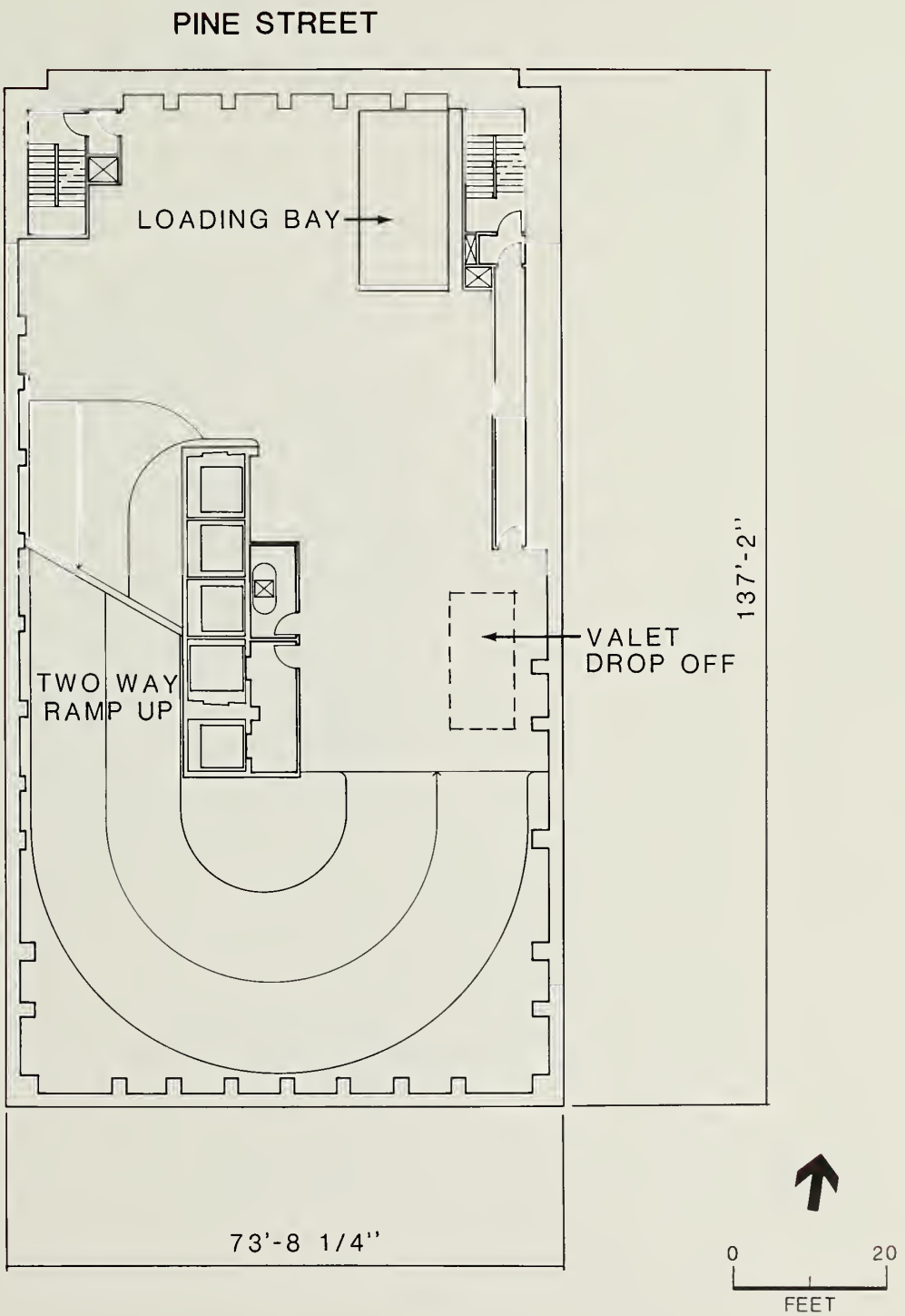


FIGURE 5
235 PINE
SERVICE LEVEL FLOOR PLAN

SOURCE: SKIDMORE, OWINGS & MERRILL

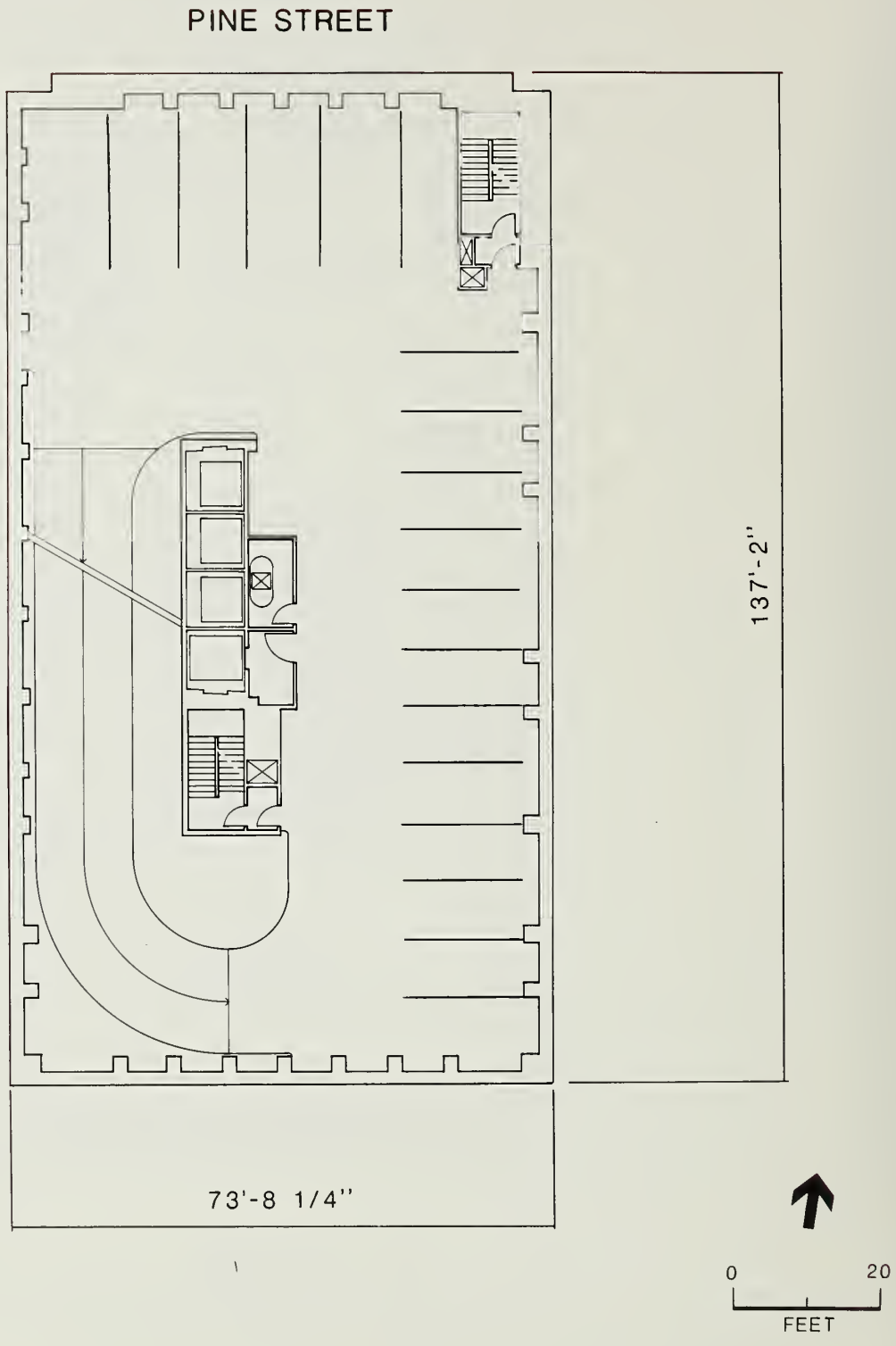


FIGURE 6
235 PINE
TYPICAL PARKING LEVEL PLAN

SOURCE: SKIDMORE, OWINGS & MERRILL

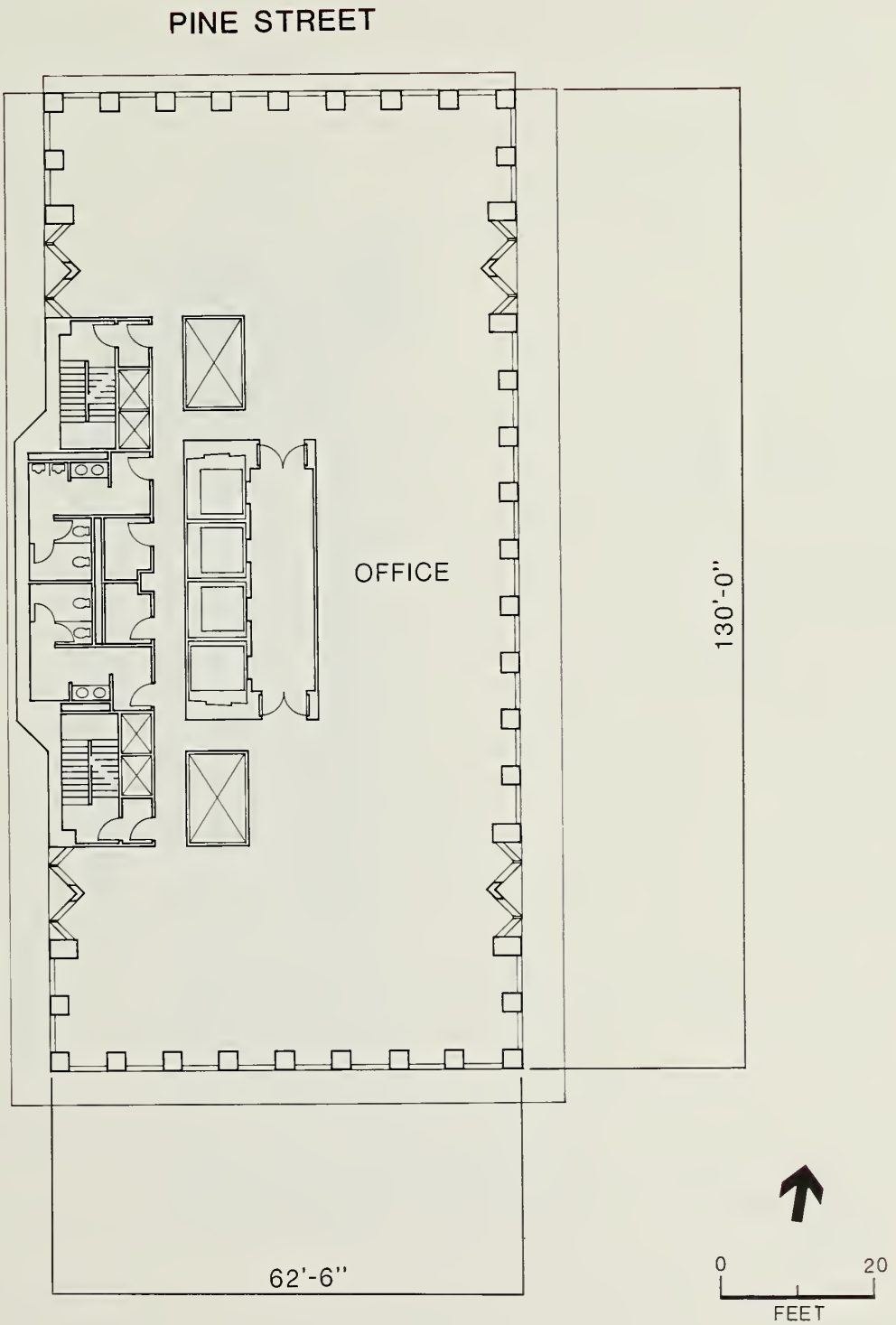


FIGURE 7
235 PINE
TYPICAL OFFICE FLOOR PLAN

SOURCE: SKIDMORE, OWINGS & MERRILL

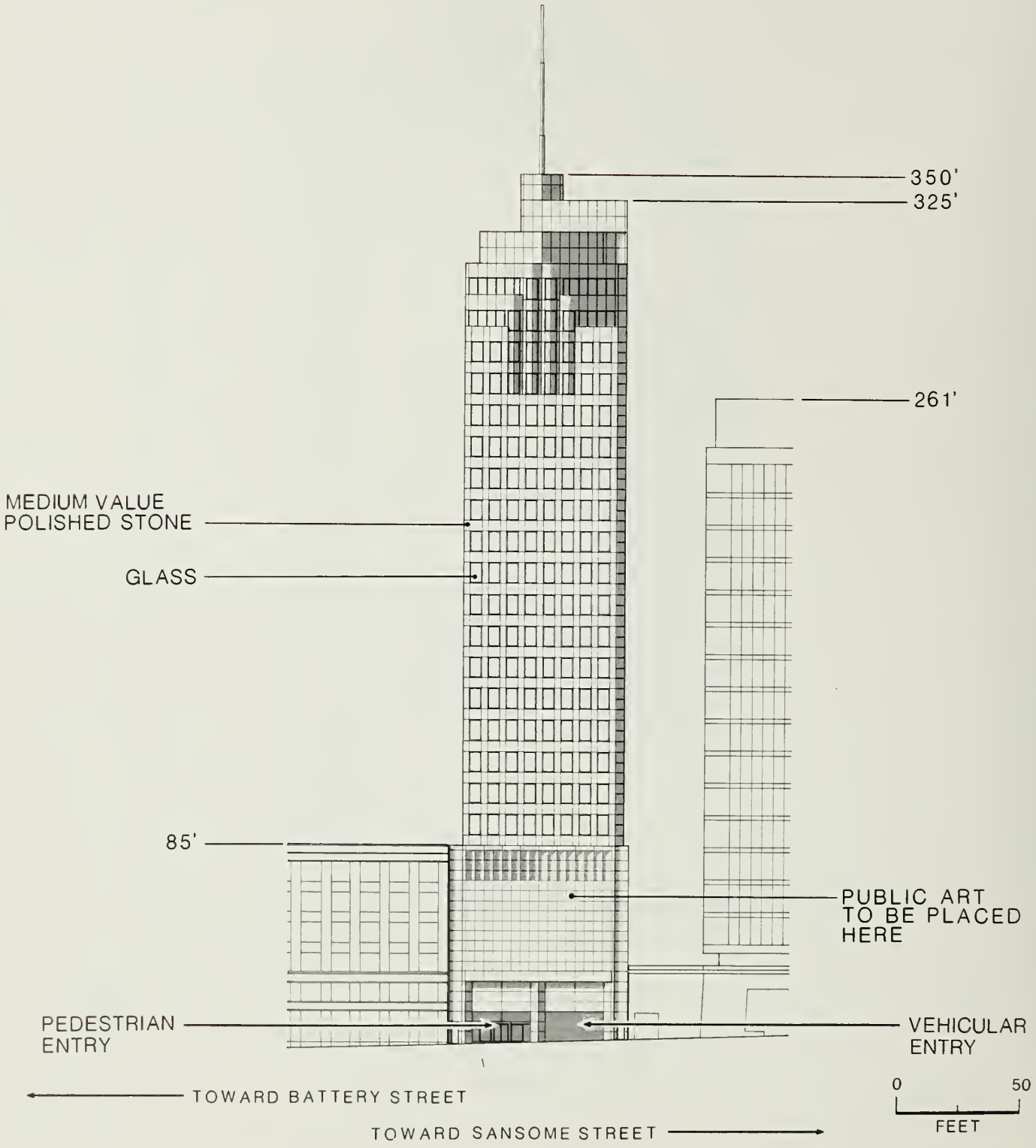


FIGURE 8
235 PINE
PINE STREET ELEVATION

SOURCE: SKIDMORE, OWINGS & MERRILL

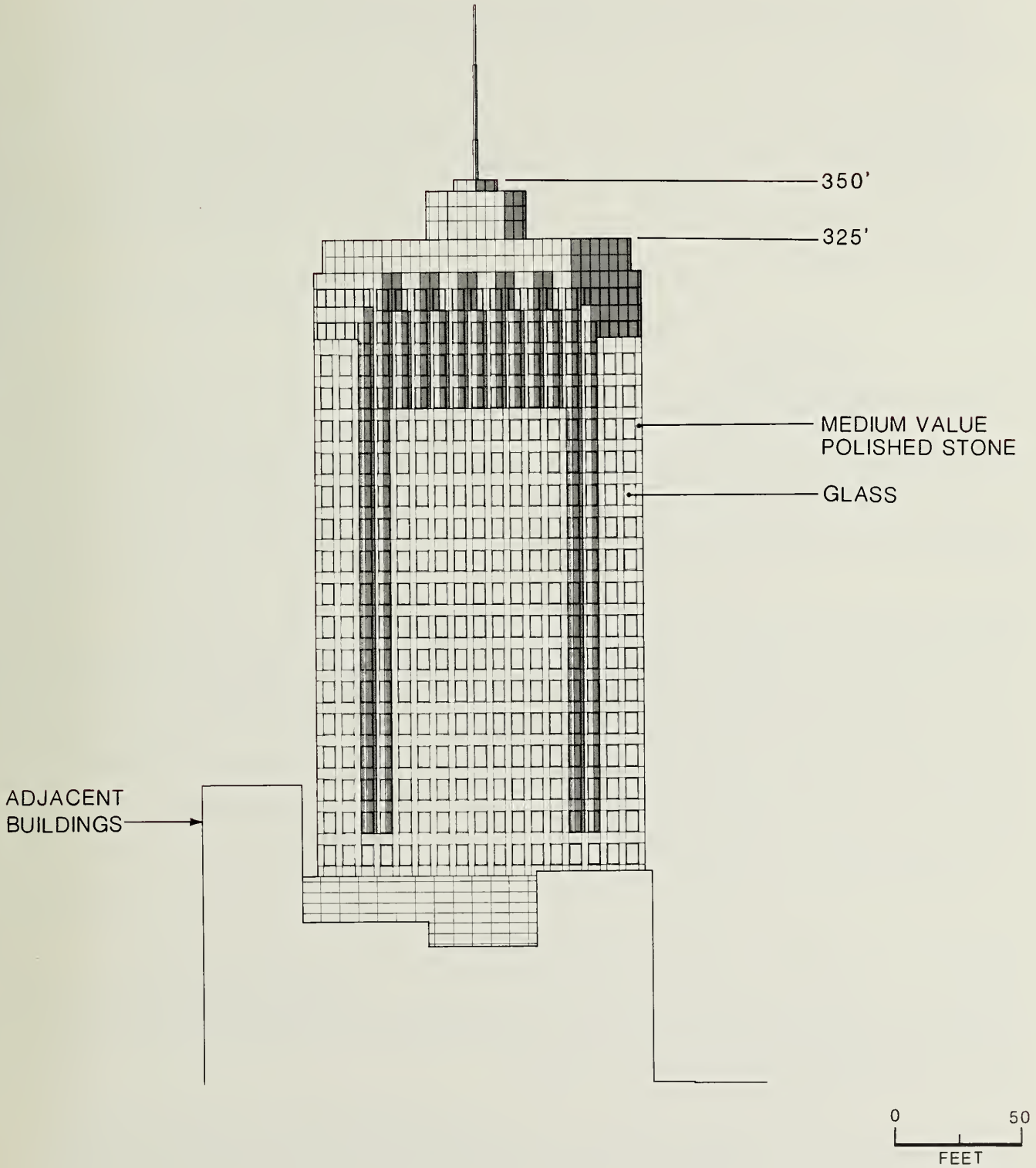


FIGURE 9
235 PINE
BATTERY STREET ELEVATION

SOURCE: SKIDMORE, OWINGS & MERRILL

D. PROJECT SCHEDULE, COST AND APPROVAL REQUIREMENTS

SCHEDULE

The project sponsor expects environmental review, project review and detailed design to be completed in the spring of 1986. If the project were approved and building permits issued, demolition and construction would take about 20 months. Construction periods are projected as follows:/1/

Demolition/Excavation	8 weeks
Foundations	12 weeks
Steel Erection	12 weeks
Exterior Finishing	42 weeks

Initial occupancy would occur about 20 months from the start of demolition.

COST

Estimated construction cost of the project would be about $19 million, including demolition, excavation, building shell and interior improvements. Replacement cost for the entire building, including architectural and engineering fees, and tenant improvements, would be about $55 million. Ground-floor retail space is expected to rent for approximately $30 to $40 per sq. ft. per year. Office space is expected to rent for approximately $25 to $35 per sq. ft. per year. (All figures are in 1986 dollars.)

APPROVAL REQUIREMENTS

Following a public hearing before the City Planning Commission on the Draft EIR, responses to written and oral comments will be prepared. The EIR will be revised as appropriate and presented to the City Planning Commission for certification. No permits may be issued before the Final EIR is certified.

The Downtown Plan was adopted and proposed amendments to the City Planning Code to implement it (Permanent Controls) were approved by the City Planning Commission on November 29, 1984 (Resolution No. 10165). The proposed amendments were acted on by the Board of Supervisors and signed by the Mayor, in September 1985, and became effective October 17, 1985.

The Office Growth Limitation Ordinance (Ordinance No. 414-85 approved September 10, 1985 by the Board of Supervisors, signed by the Mayor September 17, 1985, and effective October 17, 1985) limits growth in the form of major office developments (over 50,000 sq. ft.) in San Francisco to a total of 2.85 million sq. ft. over a period of three years (an average of 950,000 sq. ft. per year). A portion of this (1,067,913 sq. ft.) has been used by approved developments.

In accord with the ordinance, the project would be subject to review and approval under Planning Code Section 321, Office Approval and Limits.

Under Planning Code Section 309, Permit Review in the C-3 Districts, the project would require exceptions to separation of towers requirements (permitted under Section 132.1(c)2B and C), and Planning Commission consideration and approval of the proposed parking as "replacement short-term parking." Alternatively, the project could require Conditional Use authorization for the proposed parking in excess of seven percent (about 10,340 gross sq. ft.).

The City Planning Commission would hold a public hearing to consider the project application under Sections 309 and 321, including requests for exceptions under Section 309(e) and would adopt a motion approving, approving with condition, or disapproving the project./2/ If the project is approved by the City Planning Commission, the project sponsor must obtain demolition, building, and related permits from the Central Permit Bureau of the Department of Public Works. An application for a Site Permit for the project (No. 8409802S) was filed with the Central Permit Bureau on September 11, 1984, and revisions were submitted August 20, 1985.

NOTES - Project Description

/1/ Richard Hampel, Skidmore, Owings & Merrill, telephone conversation, December 23, 1985.

/2/ The Downtown Plan (Section 309(h)) institutes automatic Discretionary Review for all office and hotel projects exceeding 50,000 sq. ft. of net new area.

III. ENVIRONMENTAL SETTING

A. LAND USE AND ZONING

LAND USE

The project site is in San Francisco's Financial District, located on the south side of Pine St. between Battery and Sansome Sts. On the site is a three-story concrete parking garage with 217 valet spaces. Adjacent to the site on the east are the six-story Donahoe building (fronting Pine and Battery Sts.), a four-story structure and a three-story structure (both fronting Battery St.). The 29-story Shell building and the 14-story Adam Grant building abut the site to the south and front Bush St. The 16-story Hong Kong Bank building (fronting Pine St.) and a six-story office and retail building (fronting Sansome St.) abut the site on the west. All are office-retail buildings. The 47-story 345 California St. office and hotel development is under construction on the block across Pine St. from the project site on the north. Five existing office buildings on this (the Dollar) block are being renovated as part of the 345 California St. development.

ZONING

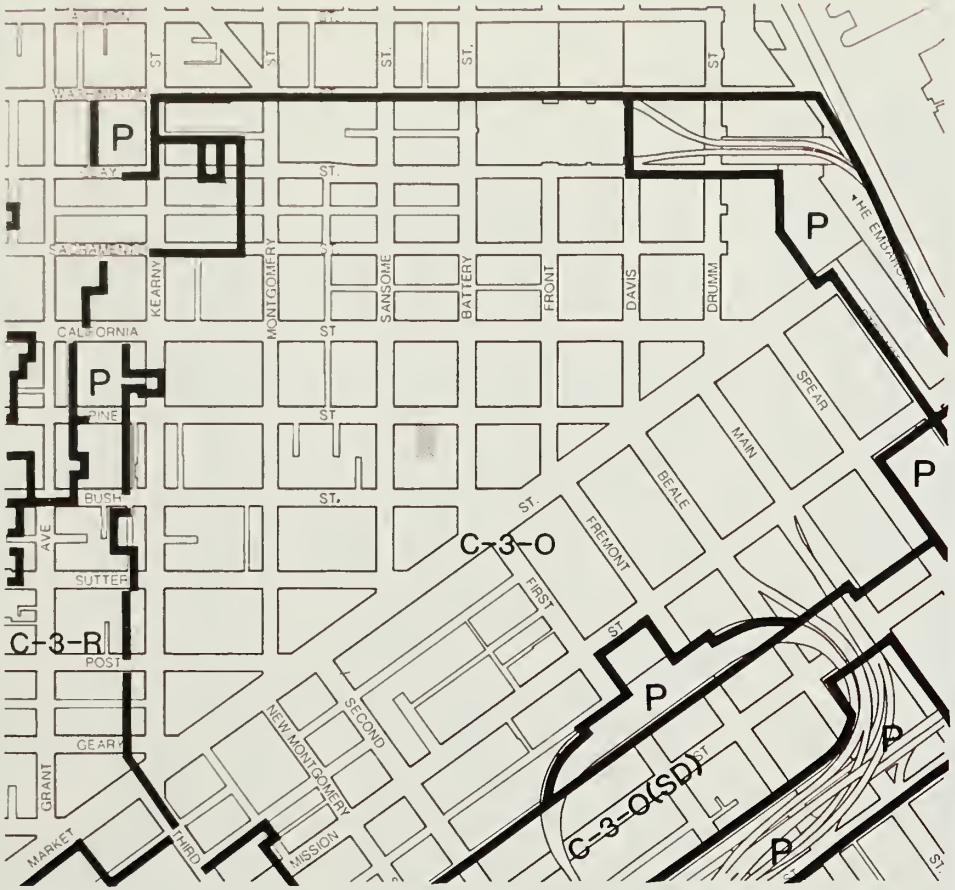
The project site is in the area regulated by the Downtown Plan. The EIR prepared for the Downtown Plan was certified on October 18, 1984. The Downtown Plan and related amendments to the San Francisco Master Plan were approved and adopted by the City Planning Commission on November 29, 1984. The Board of Supervisors approved the Downtown Plan and implementing ordinances on September 10, 1985. The ordinances were signed by the Mayor on September 17, 1985, and took effect October 17, 1985.

As noted on p. 27, the Office Growth Limitation ordinance limits growth of major office development (exceeding 50,000 sq. ft.) in the City to a total of 2.85 million sq. ft. over a three-year period. About 1,067,913 sq. ft. has been used by approved developments. Section 321 of the Planning Code implements this ordinance.

The site is in the C-3-0 (Downtown Office) use district (see Figure 10, p. 30). Office and retail are primary uses in this zoning district. Development is permitted with a basic Floor Area Ratio (FAR) of 9:1. Development greater than the basic 9:1 FAR, up to a maximum of 18:1 FAR, is allowable through transfer of development rights (TDR) from sites, in the same zoning district, that include architecturally significant buildings with unused potential floor area. All unused area applicable to the FAR of the preservation site could be transferred to a development lot in the same C-3 zoning district, subject to setback, sunlight access, separation between towers and any other limitations pursuant to Planning Code Section 309, Permit Review in the C-3 Districts.

The site is in a 450-S Height and Bulk district, in which the allowable height is 450 ft. (see Figure 10, p. 30). In the S Bulk District, the maximum length and maximum diagonal dimensions of the lower tower are 160 ft. and 190 ft., respectively. The maximum average floor size is 17,000 sq. ft.; the maximum floor size is 20,000 sq. ft. For the upper tower the bulk controls are: a maximum length of 130 ft.; a maximum average diagonal measure of 160 ft.; a maximum average floor size of 12,000 sq. ft.; and a maximum floor size of 17,000 sq. ft. Allowable exceptions to these bulk maximums are provided for in Sections 270 and 272, subject to approval under Section 309. Ten percent of permitted building height is allowed above the height limit, upon further reduction in the volume of the upper portion of the tower. Thus, in the 450-S District, the maximum allowable height is 495 ft.

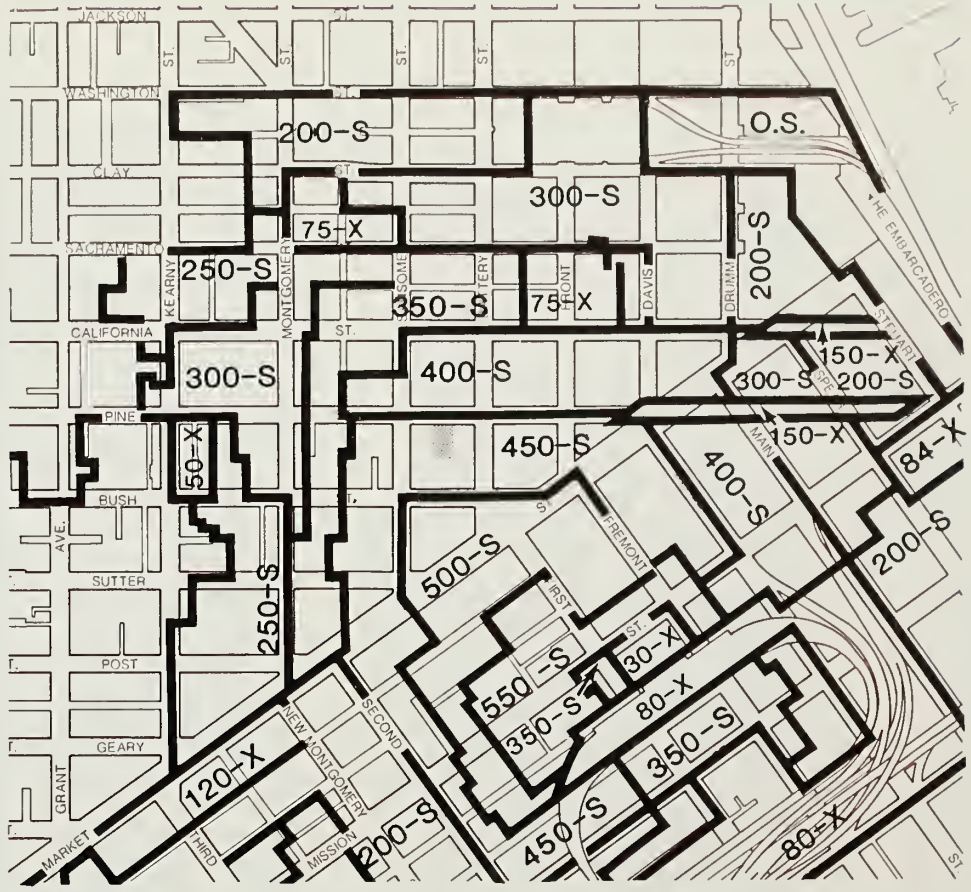
Off-street parking is not required for commercial uses in the C-3-O district, and long-term parking is discouraged. According to Section 204.5(c) of the Planning Code as amended by the Downtown Plan, up to seven percent of the gross floor area of a building may be devoted to parking as an accessory use when no parking is required. When short-term parking is required by the Planning Commission, pursuant to Section 309, to replace short-term parking displaced by a project, then even if the parking would exceed seven percent, the excess (10,360 sq. ft. for the proposed project) may, with the approval of the Planning Commission, be excluded from the FAR calculation (Section 102.8(B)16). (About 67 of the 217 spaces currently on-site operate as short-term spaces (vehicles remaining less than four hours); see Appendix C, p. A-44.) In C-3 districts, off-street loading and service vehicle spaces are required as follows: 0.1 spaces per 10,000 sq. ft. of office (to closest whole number); no spaces are required for less than 10,000 gross sq. ft. of retail (Planning Code, Section 152.5, Table 5.5).



LEGEND

- C-3-O DOWNTOWN OFFICE DISTRICT
- C-3-O (SD) DOWNTOWN OFFICE SPECIAL DISTRICT
- C-3-S DOWNTOWN SUPPORT DISTRICT
- P PUBLIC USE DISTRICT
- SITE

0 FEET 500



LEGEND

NUMBERS INDICATE MAXIMUM BUILDING HEIGHT. IN 'S' BULK DISTRICTS, HEIGHT MAY BE INCREASED BY UP TO 10%.

LETTERS INDICATE BULK DISTRICTS.

S - MANDATORY VOLUME REDUCTION AT UPPER FLOORS (SEE TEXT FOR FULL DISCUSSION)

X - BULK LIMITS NOT APPLICABLE

SITE

0 FEET 500

SOURCE: SAN FRANCISCO CITY PLANNING CODE

235 PINE
DOWNTOWN PLAN
USE DISTRICTS

FIGURE 10
235 PINE
DOWNTOWN PLAN
HEIGHT AND BULK DISTRICTS

B. URBAN DESIGN

DESIGN

The building on the site is a three-story unembellished concrete parking structure (see Figure 11, p. 32). The project area is a mix of older (largely 1920s) and newer (beginning in the 1950s) development. Older buildings tend to be of brick or a mix of brick and concrete, often with terra cotta ornamentation, recessed ornamented windows, single or double cornices, and distinct compositional elements; thus, they generally contain more surface ornamentation than more recently constructed high-rise buildings. Older buildings range from relatively low-scale (such as the six-story Donahoe building adjoining the site on the east) to taller buildings, such as the 29-story Shell building on the southern portion of the project block.

Five buildings on the project block were rated by Heritage in its 1978 survey; three were rated A (Shell building, Heineman building and Adam Grant building - see Figure 1, p. 14) one was rated B (Donahoe building) and one C (77 Battery -- south of the Donahoe building, abutting the site on the east). Four of these buildings are rated in the Downtown Plan, all Category I, retain essentially intact (Shell, Heineman, Adam Grant and Donahoe buildings). In the Department of City Planning's Architectural Inventory of 1976, the Shell and Heineman buildings are rated "5" (the highest on this survey's scale) while the Adam Grant building is rated "2" and the Donahoe building is rated "1." The Pine/Sansome Conservation District, designated in Article 11 of the City Planning Code, is located one-half block west of the project site. The existing on-site garage is unrated in any of the above rating systems.

Across Pine St. at the corner of Battery and Pine Sts. is the 216 Pine St. building, constructed in 1907 and remodeled in 1939 and 1973-74. The 216 Pine St. building was rated "C" by Heritage and Category IV in the Downtown Plan, but was not rated in the 1976 Department of City Planning Architectural Inventory. The eight-story building has rusticated piers, differentiated end bays, recessed windows, a cornice above the base, and smaller cornices below and above the top story. The building is of reinforced concrete.

At the northeast corner of Pine and Sansome Sts. is the American International building at 200-206 Sansome St. The American International building was rated B by Heritage and Category I in the Downtown Plan, but was not rated in the Department of City Planning's

FIGURE 11
235 PINE
PHOTOGRAPH OF SITE

SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES, INC.

Architectural Inventory of 1976. This 17-story brick structure was built in 1927. Awnings extend from ground-level windows, over which are peaked arched windows. The building has gothic ornamentation and terra cotta detailing. Between this building and the 216 Pine St. building, the 345 California St. building, with 47 stories, is nearing completion.

More modern buildings tend to be highrises constructed of concrete, steel and glass. Windows are generally flush with the facade and ornamentation is minimal. Building bases are minimally defined, and building forms tend to be unrelieved rectangles. This is particularly true of buildings from the 1960s and early-to-mid-1970s. Recent construction in the site area (101 California St., 345 California St.) departs in form from box-shaped earlier highrises.

Existing buildings in the project block range from three to 29 stories, with generally light colors and facade materials including light-colored brick, sepia and cream terra cotta, brown-painted and light grey concrete, and glass. The Hong Kong Bank building, west of the site, was built in 1965. It is 16 stories tall and faced in glass and concrete. The Hong Kong Bank building office tower is set back from a sloped concrete base with recessed entries and no windows. A second-level private terrace separates the Hong Kong Bank building from the garage on the project site. The six-story Donahoe building, east of the site, was built in 1908 and was designed by Ross and Burgren. It is faced in light-colored rusticated stone with iron detailing and pilasters at the ground floor. It has two cornices, one at the second story and one at the roof; windows are recessed.

Buildings in the area generally are built to their lot lines and form continuous street frontages which define the gridiron street pattern of the Financial District, with few parking lots or alleys. Open space in the area is limited. There is a private terrace on the roof of the parking garage of the adjacent Hong Kong Bank building; Mechanic's Plaza is at Market and Battery Sts. The Crown Zellerbach building, about one block south of the site, has a sunken plaza. The Tishman and Metropolitan Life plazas are on the south side of Market St. on the blocks on either side of First St. The Fremont Center Plaza is on First St. two blocks south of the site. The 101 California St. building plaza is one and one-half blocks to the southeast of the project site. Justin Herman Plaza is about three blocks east of the site.

The site building is visible from the east and west on Pine St. and from points closer in to the site. Taller intervening buildings block views of the site building from more distant points.

Pine St. is a designated view corridor for views toward the Bay. The view east along Pine St. is terminated by the PG&E building on the south side of Market St.

C. SHADOW AND WIND

SHADOW

The existing three-story building on the site casts shadow on Pine St., and on the second-level garden terrace of the Hong Kong Bank building adjacent to the site on the west. Existing development in the project area casts extensive shadow in the project vicinity.

Existing and project shadow patterns for various times of the day and year are shown in Chapter IV, Environmental Impact, p. 62.

WIND

U.S. Weather Bureau data show that westerly (i.e. from the west) to northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco./1/ Of the 16 primary wind directions measured at the Weather Bureau station (at a height of 132 ft.), four directions comprise the greatest frequency of occurrence as well as the majority of strong wind occurrences. These are northwest, west-northwest, west and west-southwest, with occurrence rates of about 10%, 14%, 35%, and 2%, respectively, of the time between the hours of 6:00 a.m. to 8:00 p.m throughout the year. The remaining 12 wind directions comprise the remaining 36% frequency of annual occurrence with lower wind speeds. Calm conditions occur two percent of the time.

Average wind speeds are highest during summer and lowest during winter months. However, strongest peak winds occur in winter, when speeds of 47 mph have been recorded./2/ The highest average wind speeds are in the mid-afternoon, and the lowest are in the early morning.

Between the hours of 7:00 a.m. and 6:00 p.m. on an annual basis, wind speeds measured at the Weather Bureau station exceeded 21, 25, 21, and 18 miles per hour (mph) 10% of the time for northwest, west-northwest, west, and west-southwest winds, respectively, while the 12 remaining wind directions exceeded 15 mph 10% of the time.

Pedestrian Comfort and Wind Criteria

Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, high-rise buildings can redirect wind flows around buildings and divert winds downward to street level; each can result in increased wind speed and turbulence at street level.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four mph have no noticeable effect on pedestrian comfort. With winds from four to eight mph, wind is felt on the face. Winds from 8 to 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. For winds from 19 to 26 mph, the force of the wind will be felt on the body. At 26 mph to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and gusts can blow people over./3/

In order to provide a comfortable wind environment for people in the Downtown, Section 148 of the Planning Code establishes an equivalent (includes the effects of turbulence) windspeed (as defined in the code) of seven and 11 mph as comfort criteria and 26 mph as a wind hazard criterion. Section 148 sets comfort levels of seven mph equivalent wind speed for public seating areas and 11 mph equivalent wind speed for areas of subtantial pedestrian use. New buildings and additions to buildings may not cause ground level winds that would exceed these levels more than 10% of the time year round between 7:00 a.m. and 6:00 p.m. year round./4/ If existing wind conditions exceed the comfort level, new buildings and additions shall be designed to reduce ambient wind speeds to meet the requirements.

A building may qualify for an exception to the standard that would allow it to add to the amount of time the comfort level is exceeded by the least practical amount if 1) it can be shown that the building or addition cannot be shaped and other wind baffling measures cannot be adopted to meet the foregoing requirements without creating an unattractive

and ungainly building form and without unduly restricting development of the building site in question, and 2) it is concluded that, because of the limited amount by which the comfort level is exceeded, the limited location in which the comfort level is exceeded, or the limited time during which the comfort level is exceeded, the addition is insubstantial. No building or addition that would cause wind speeds to exceed the 26 mph hazard level for more than a single hour of any year would be permitted.

Existing and project generated wind conditions are discussed in detail in Chapter IV, Environmental Impact, p. 58 and Appendix B, p. A-34.

NOTES - Wind

/1/ The U.S. Weather bureau data used in this analysis were originally gathered at the weather station atop the old Federal building at 50 United Nations Plaza during the years 1945-50. Data were taken hourly, annually for 16 wind directions. The data base, comprised of 32,795 hourly observations, is of sufficient length to provide a reliable estimate of future climatic conditions in San Francisco.

/2/ E. Jan Null, Climate of San Francisco, NOAA Technical Memorandum, NWS WR-126, February 1978.

/3/ Lawson, T.V., and A.D. Penwarden 1976, "The Effects of Wind on People in the Vicinity of buildings," Proceedings of the Fourth International Conference on Wind Effects on buildings and Structures, London, 1975, Cambridge University Press, Cambridge, U.K., 605-622.

/4/ Section 148 of the Planning Code specifies the hours of 7:00 a.m. to 6:00 p.m. The available weather data that cover that interval cover the hours of 6:00 a.m. to 8:00 p.m. Thus, observation from two additional evening hours and one additional morning hour are included in these data. Because, in general, winds are stronger in the afternoon and evening than in the morning, this approximation is conservative - it is likely to overestimate the existing and projected wind speeds.

D. CULTURAL RESOURCES/1/

No evidence exists of prehistoric (ca 8000 B.C. - 1845 A.D.) activity at the project site or in its vicinity. It is doubtful that cultural remains from the early American period (1846-1848) would be recovered, as the site remained undeveloped throughout those years. The earliest recorded history at this site dates from the Gold Rush (ca 1849-1857) Period when in 1849, one of San Francisco's early founders purchased part of the project site. It can not be determined from available archival sources whether or not the site was

actually developed at this time, or purchased for real estate speculation. It is likely that several sets of short-lived structures were erected within the project area by 1852 because of frequent fires that razed this area during the early days of the Gold Rush. No data exists regarding the site during the City Building Period (1858-1886), although the project area was well developed with a mix of retail, wholesale and manufacturing firms.

In 1887 during the late 19th Century Period (1887-1906), the Sanborn Insurance Map shows the project site occupied by two adjacent, two-story brick buildings. One building was used as a store and auction house, while the other was used as a store with a restaurant in the rear. Similar uses occurred on the site during the 20th Century Period. Most recently, in the 1950s, the site was developed as a three-story parking garage with 217 valet parking spaces, and it is this use that would be removed to make way for the proposed project.

The site conditions at the time of the Gold Rush Period consisted of Bay mud. Since that time, filling occurred in late 1849 or early 1850, leaving the site in flat terrain, about four feet above the City datum at this time.

The proposed project would include excavation to a depth of about nine feet which would be below the foundation level of the existing building (about one foot) and which could disturb soils probably not exposed since 1859. Artifacts of consequence from this era typically found at similar San Francisco sites include architectural remnants, trash pits, and privies and other scattered objects from the Gold Rush Period which have served to expand the historic record of the people and events of that era.

NOTE - Cultural Resources

/1/ An archival search was conducted for the project by Allen Pastron, Ph.D, November 1984; the resulting cultural resources report entitled Cultural Resources Evaluation of 235 Pine Street, San Francisco, is on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, Sixth Floor, San Francisco, California, 94102.

E. TRANSPORTATION

The existing on-site 217-space garage provides parking for long- and short-term users. A parking turnover suvey (see Appendix C, p. A-44) indicates that 67 of the 217 spaces

operate as short-term spaces (vehicles stay less than four hours), the remainder as long term (vehicles staying four hours or more).

The site is served by local streets and by portions of the regional freeway system (see Figure 1, p. 14). Access to the freeway connecting with the East Bay via the Bay Bridge is provided by ramps at Clay and Battery Sts. (about 1,700 ft. northeast of the site) and at Mission and Beale Sts. (about 1,700 ft. southeast of the site). Access to the freeway connecting with the Peninsula and San Francisco International Airport is also provided by these ramps. Access from the freeway system to the project site is provided by off-ramps at Washington and Battery Sts. (about 1,800 ft. northeast of the site) and at Mission and Main Sts. (about 1,800 ft. southeast of the site).

The site is within the Downtown Core automobile control area designated in the Downtown Transportation Plan of the Transportation Element of the San Francisco Master Plan./1/ A Plan goal is to reduce the number of private commuter vehicles and excess automobile traffic in the Downtown Core; the Downtown Transportation Plan discourages the addition of new long-term parking spaces in and around downtown.

In the vicinity of the project site, Pine, Battery, Sansome and Market Sts. are designated as Transit Preferential Streets, on which priority is given to transit vehicles over autos during commute and business hours on weekdays./1/ Pine St. is also designated for shuttle transit for intradowntown movements, especially from parking belts to the downtown core. Battery and Sansome Sts. are designated as pedestrian-oriented streets; such streets are vehicular streets on which design measures should be implemented to improve mobility and to render existing pedestrian space more pleasant and efficient. Pine and Bush Sts. function as a pair moving traffic westbound and eastbound, respectively. Battery and Sansome Sts. also act as a pair, carrying traffic southbound and northbound respectively. The intersections of Pine St. with Battery and Sansome Sts. are both signal-controlled (as are the intersections of Bush with Sansome and Battery, south of the project site).

The site is served by San Francisco Municipal Railway (Muni) electric trolley and motor coach lines, providing radial service to and from the downtown area. Muni Metro light rail vehicle lines are accessible via the Montgomery Station of the Market St. subway, two blocks south of the project site. The closest Muni bus stops to the project site are at the intersections of Pine and Battery Sts. and Pine and Sansome Sts., including the

42-Downtown Loop, 12-Folsom, 38-Geary Express, 31-Balboa Express and 1-California Express lines.

Market St. is located two blocks south of the site; it was designated a Transit Thoroughfare in the Market Street Planning Project Final Report (November 1985). In August 1985, Muni began a nine-month trial operation of four-lane service on Market St. between the Financial District and Civic Center; this is expected to improve surface transit along Market Street. Improvements along Market St. in the vicinity of the project include relocated bus stops to conform with providing four transit lanes on Market St.

Regional transit service to the site is provided to and from the East Bay by the Bay Area Rapid Transit District (BART) at the Montgomery Station on Market St. (two blocks southwest of the site), and by AC Transit motor coaches at the Transbay Transit Terminal, on Mission St. at First St., three blocks southeast of the project site. Muni and Bay Area Rapid Transit District (BART) routes in the project vicinity are shown on Figure 18, p. 74.

Service to the Peninsula is provided by Caltrain from the train terminal at Fourth and Townsend Sts.; by the San Mateo County Transit District (Samtrans), with bus routes along Mission St.; and by BART, which provides transfers to Samtrans routes at the Daly City BART Station. Independently owned and operated jitneys provide service along the entire length of Mission St. (from The Embarcadero to Daly City) during a.m. and p.m. peak hours.

The Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) provides a.m. and p.m. peak-period bus service from/to Marin and Sonoma Counties. The closest (outbound) boarding stop to the project site is on Sansome St. at Sacramento St. (about two blocks northwest of the site); the closest discharge stop to the project site is located on Battery St. at Sacramento St. (about two block northeast of the site). Golden Gate Transit provides ferry service to terminals in Larkspur and Sausalito from the Ferry building (about 3,500 ft. northeast of the site).

Golden Gate Transit also operates a vanpool and club (subscription) bus program to areas not served by fixed routes. The RIDES carpool program, operating as a nonprofit, publicly funded corporation, provides consulting and matching services to help establish Bay Area carpools and vanpools. There are about 1,240 combined carpools and vanpools on the Golden Gate Bridge during the a.m. peak hour, carrying about 2,200 people daily (average

occupancy of 3.6 persons per ridesharing vehicle)./2/ The Bay Bridge has about 2,800 carpools during the a.m. peak hour; carpools from/to the East Bay carry about 10,900 people daily (an average occupancy of 3.3 persons per carpool vehicle)./3/

The Pine St. sidewalk in front of the project site, and crosswalks on Pine St. and Sansome and Battery Sts., currently operate in the unimpeded to impeded ranges during both the noon and p.m. peak hours./4/

The estimated parking demand (both long-term and short-term) from the C-3 District in 1984 was found to be about 45,300 spaces, which would occupy about 94% of the 48,000 parking spaces in and near the C-3 District.

NOTES - Transportation

/1/ San Francisco Department of City Planning, January 1983, Transportation, An Element of the Master Plan.

/2/ Maria Thayer, Golden Gate Bridge, Highway and Transportation District, telephone conversation, December 2, 1985.

/3/ Traffic Survey Services MA-60, Bay Bridge, Metropolitan Transportation Commission, Spring 1985.

/4/ Pedestrian counts conducted by ESA on Tuesday, November 13 and 20, 1984, from 12:00 p.m. to 1:00 p.m. and 4:30 p.m. to 5:30 p.m.

F. AIR QUALITY

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network which measures the ambient concentrations of six air pollutants: ozone (O_3), carbon monoxide (CO), total suspended particulates (TSP), lead (Pb), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). On the basis of the monitoring data, the Bay Area, including San Francisco, currently is designated a non-attainment area with respect to the federal ozone and CO standards. A three-year summary of the data collected at the BAAQMD monitoring station nearest the project site (about three miles southwest at 900 23rd St.) is shown in Appendix D, p. A-46, together with the corresponding federal and/or state ambient air quality standards. In 1984, there was one violation of the federal and state ozone standards, one violation of federal and state eight-hour CO standards and five violations of the previous state 24-hour TSP standard; in 1983, there was one violation of the federal and state one-hour average ozone standards and four violations of

the previous state 24-hour average TSP standard; and in 1982 there was one violation of the federal and state eight-hour CO standard and three violations of the state 24-hour average TSP standard./1/

BAAQMD has conducted two CO "hotspot" monitoring programs in the Bay Area, including San Francisco. One CO monitoring program was conducted during the winter of 1979-80 and included the intersection of Washington and Battery Sts. in San Francisco, about 1,000 ft. north of the site./2/ The high eight-hour average concentration was 10.1 ppm, which violates the 9-ppm state and federal standards by 1.1 ppm. The high one-hour average concentration of 15 ppm does not violate the 20-ppm state standard or the 35-ppm federal standard. Another CO monitoring program was conducted during the winter of 1980-81 and included the San Francisco intersections of Geary and Taylor Sts., about 0.8 mile southwest of the site, and 100 Harrison St. at Spear, about one mile southeast of the site./3/ At Geary and Taylor the observed high eight-hour average concentration was 11.5 ppm, which violates the standards by 2.5 ppm, and the high one-hour concentration was 15 ppm, which does not violate standards. At Harrison St., the observed high eight-hour and one-hour average concentrations were 7.8 ppm and 13 ppm, respectively, which do not violate standards. These data indicate that locations in San Francisco near streets with high traffic volumes and congested flows may experience violations of the eight-hour CO standard under adverse meteorological conditions.

Comparison of these data with those from other BAAQMD monitoring stations indicates that San Francisco's air quality is among the least degraded of all the developed portions of the Bay Area. Two of the three prevailing winds, westerly and northwesterly blowing off the Pacific Ocean, reduce the potential for San Francisco to receive pollutants from elsewhere in the region.

San Francisco's air quality problems, primarily CO and TSP, are due largely to pollutant emissions from within the City. CO is a non-reactive pollutant and its major source is motor vehicles. CO concentrations are generally highest during periods of peak traffic congestion. TSP levels are relatively low near the coast, increase with distance inland, and peak in dry, sheltered valleys. The primary sources of TSP in San Francisco are demolition and construction activities, and motor vehicle travel over paved roads.

San Francisco contributes to air quality problems, primarily ozone, a regional problem, in other parts of the Bay Area. Ozone is not emitted directly from sources, but is produced

in the atmosphere over time and distance through a complex series of photochemical reactions involving hydrocarbon (HC) and nitrogen oxide (NOx) emissions, which are carried downwind as the photochemical reaction occurs. Ozone standards are violated most often in the Santa Clara, Livermore, and Diablo Valleys, because local topography and meteorological conditions favor the buildup of ozone and its precursors there.

In 1982, emissions from motor vehicles were the source of 86% of the CO, 46% of the HC, 44% of the TSP, and 56% of the NOx in San Francisco, while power plant fuel combustion was the largest single source of sulfur oxides (SOx), about 33% of the total./4/ These percentages are expected to apply reasonably well to current conditions.

In response to the Bay Area's ozone and CO nonattainment designations, the Association of Bay Area Governments (ABAG), BAAQMD, and the Metropolitan Transportation Commission (MTC) prepared and adopted the 1982 Bay Area Air Quality Plan, which establishes pollution control strategies to attain the federal ozone and CO standards by 1987 as required by federal law./5/ These strategies were developed on the basis of detailed subregional emission inventories and projections, and mathematical models of pollutant behavior, and consist of stationary and mobile source emission controls and transportation improvements. The BAAQMD, MTC, and California Bureau of Automotive Repair (a state agency) have primary responsibility for implementation of these strategies.

NOTES - Air Quality

/1/ State standards for particulate matter changed in 1983 to concentrate on fine particulate matter, which has been demonstrated to have health implications when inhaled. Concentration standards also changed. There is not yet an adopted method for monitoring fine particulate matter. Until the State adopts a method, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards.

/2/ Association of Bay Area Governments, AQMP Tech Memo 33, "Summary of 1979/80 Hotspot Monitoring Program," Berkeley, California, June 1980.

/3/ Association of Bay Area Governments, AQMP Tech Memo 40, "Results of the 1980/81 Hotspot Monitoring Program for Carbon Monoxide," Berkeley, California, January 1982.

/4/ Bay Area Air Quality Management District (BAAQMD), "Base Year 1982 Emissions Inventory, Summary Report," San Francisco, California, November 1, 1983.

/5/ Association of Bay Area Governments (ABAG), BAAQMD, and MTC, 1982 Bay Area Air Quality Plan, Berkeley, California, December 1982.

IV. ENVIRONMENTAL IMPACTS

An application for environmental evaluation for the project was filed on September 6, 1984. On December 27, 1985, on the basis of an Initial Study, the Department of City Planning, Office of Environmental Review, determined that a tiered Environmental Impact Report was required. Issues determined as a result of the Initial Study to require no further environmental analysis include: Reflected Light and Glare, Population (Employment and Housing), Operational and Construction Noise, Air Quality During Construction, Utilities/Public Services, Biology, Geology/Topography, Water, Energy, and Hazards. Therefore, this document does not discuss these topics (see Appendix A, p. A-2 to A-33, for the Initial Study).

This tiered EIR has been prepared for the project pursuant to Sections 21093 and 21094 of the California Environmental Quality Act (CEQA). The EIR is tiered from the EIR for the Downtown Plan (EE81.3, Final EIR certified October 18, 1984). The 235 Pine Street EIR analyzes project-specific impacts. It discusses potentially significant effects of the project that were not examined in the Downtown Plan EIR and includes applicable mitigation measures for site-specific effects. The analysis identifies the project portion of the relevant cumulative impacts forecast in the prior EIR.

The Downtown Plan EIR process included development of a complex and sophisticated economic forecast of employment growth, and computerized transportation and air quality models for calculating and predicting cumulative impacts of development in the downtown C-3 districts to the year 2000. Development of the forecast and transportation and air quality models, and presentation of their analyses in the EIR required several years of work. The Downtown Plan EIR, from which this later single-project EIR is tiered, includes about 400 pages of Comments and Responses to those comments. The Downtown Plan Final EIR was certified October 18, 1984.

The Downtown Plan EIR forecasts and analyzes the effects of cumulative development (including those of the project) in the Downtown C-3 district to the year 2000. That analysis remains current and valid for future and project conditions, and thus, the project is not subject to CEQA Section 21166 regarding changed circumstances or new information.

The Downtown Plan, itself, was approved by the Planning Commission on November 29, 1984, and its implementing ordinances were approved by the Board of Supervisors (Ordinance 414-85 approved September 10, 1985), effective October 17, 1985. The approval process thus took place over about 12 additional months subsequent to the EIR and included public hearings and testimony. Discussion of, as well as explanation and clarification of issues and information in, the Downtown Plan EIR included exhaustive review in public forums, during the EIR process and the Plan approval process, before the Planning Commission and the Board of Supervisors.

Comments on this single-project EIR for 235 Pine Street are to be confined to those matters analyzed in this EIR, related to project-specific effects and the relation of this project to relevant cumulative impacts. Insofar as the Downtown Plan EIR is a final, certified document, it would be inappropriate to reopen the EIR process by accepting further comments on that EIR. Therefore, comments on material contained in the prior EIR from which this project-specific EIR is tiered will not be accepted.

Some of the effects presented in this Impact Chapter are not physical effects as defined by CEQA. They are included in the EIR for informational purposes only.

As discussed in the Initial Study, the project would be consistent with the Downtown Plan policies and ordinances for which a Final EIR (EE81.3) was certified October 18, 1984. The project's consistency with these local land use plans and zoning meets the CEQA requirements for a tiered EIR.

A. LAND USE AND ZONING

LAND USE

The project would be an infill office project, replacing a three-story valet parking garage with office, retail and parking uses. The project would contain uses similar to those in

other buildings in the area. It would replace the existing parking use on the site with the same use, although with fewer spaces.

The 235 Pine St. project, located within the C-3-0 District, would be consistent with the designated primary use of this District under the Downtown Plan; that is, high-density office and retail (p. 24 of the Downtown Plan). The project would be consistent with the description of the C-3-0 (Downtown Office) district described in Article 2, Section 210.3 of the City Planning Code. The Section states that the district, "playing a leading national role in finance, corporate headquarters and service industries and serving as an employment center for the region, consists primarily of high quality office development."

THE DOWNTOWN PLAN

The Downtown Plan, an element of the Master Plan, effective October 17, 1985, contains comprehensive controls regarding the scale, intensity, and location of growth in downtown San Francisco; architectural preservation; open space; sunlight access; wind criteria; and transportation. The relationship of the project to the major sections of the Downtown Plan is discussed here and summarized in Table 2, p. 46.

Under the Downtown Plan, the basic FAR for the C-3-0 district, including the project site, is 9:1. Floor Area Ratio is the ratio of gross floor area of the building to site size; under the Downtown Plan it would be the ratio of gross floor area of building to site size, and the area of a number of building uses can be excluded from the gross floor area calculation. The Downtown Plan excludes the following from gross floor area for the FAR calculation: ground-floor building service and internal circulation; required replacement short-term parking; cultural, religious and social service areas; and ground-floor (and mezzanine-level, subject to approval under Section 309) retail, restaurant, and personal service space up to 75% of ground-floor open space and interior areas (Section 102.8(b) 11 to 16). Development greater than the basic 9:1 FAR is allowable up to a maximum of 18:1 FAR, through transfer of development rights (TDR), from sites within the same zoning district that include architecturally significant buildings with unused potential floor area. The combined basic FAR over the preservation (sender) and receiver sites may not, however, exceed 9:1. The building on the development site receiving TDR must comply with all limitations imposed by the Planning Code, including review under Section 309: Permit Review in C-3 Districts.

TABLE 2: RELATIONSHIP OF THE PROJECT TO MAJOR PROVISIONS OF THE DOWNTOWN PLAN

	Downtown Plan Limits/Requirement	Project
Height	450 ft.	350 ft.
Bulk		
Base Height	86 ft.	84 ft.
Lower Tower		
Length	160 ft.	130 ft.
Diagonal	190 ft.	145 ft.
Maximum Average Floor	17,000 sq. ft.	8,250 sq. ft.
Maximum Floor	20,000 sq. ft.	8,250 sq. ft.
Upper Tower		
Length	130 ft.	130 ft.
Diagonal	160 ft./b/	145 ft.
Maximum Average Floor	12,000 sq. ft.	8,045 sq. ft.
Maximum Floor	17,000 sq. ft.	8,045 sq. ft.
Volume Reduction (above 230 ft.)	4 %	4.2 %
FAR	9:1 Basic 18:1 Maximum with TDR	14.5:1/a/
Open Space	2,950 sq. ft.	Off-site. Contribution to improvement of Commercial St. from Sansome St. to Montgomery St.
Art	Public art equal to one percent of construction cost.	Project would comply.
Child care	On-site child care brokerage services required.	Project would comply.
Shadow	Minimize substantial shadow impacts on public plazas and other publicly accessible spaces, without unduly restricting development potential; consider duration, area, and importance of sunlight to utility of open space.	Project would not add any new shadow to any public open space.

(Continued)

TABLE 2: RELATIONSHIP OF THE PROJECT TO MAJOR PROVISIONS OF THE DOWNTOWN PLAN (Continued)

	Downtown Plan Limits/Requirement	Project
Wind	Ground-level winds may not exceed (more than 10% of the time year round between 7:00 a.m. and 6:00 p.m.), 11 mph in areas of substantial pedestrian use and seven mph in public seating areas.	Project would not cause wind speeds to violate comfort criteria.
Off-street Loading	One space (0.1 spaces per 10,000 sq. ft. office).	One space.
Parking	Rate structure to encourage short-term use; Planning Commission may approve replacement short-term parking, which would then be exempt from FAR; long-term parking discouraged.	Project would replace 60 of 217 spaces; spaces would be operated as short-term.
Transportation Broker	Required	Would be provided by building management.
Housing	OAHPP requires 57 units for proposed 147,700 net new sq. ft. of office.	Would conform to OAHPP (through direct sponsorship of a housing development)./c/
Architectural Resources	Designates buildings in Categories I to IV based on architectural merit, with related provisions regarding preservation.	Not applicable. Building on-site is not designated in any Category or rated in any survey based on architectural merit.
	SECTION 309 EXCEPTIONS	
Section 132.1(c). Separation of Towers		
Requirement: Minimum setback above base of 15 ft. from interior property line or center line of street.		
Exception: The project would be set back less than the required amount from interior property lines. The project would be set back about five ft. on the east and west and		

(Continued)

TABLE 2: RELATIONSHIP OF THE PROJECT TO MAJOR PROVISIONS OF THE DOWNTOWN PLAN (Continued)

about six ft. on the south. Exception to the set back requirement would be permitted in accordance with the provisions of Section 309 under Section 132.1, subsections (c)2.B. and (c)2.C. The text of the exception language is:

B) Exceptions may be allowed to the extent that it is determined that restrictions of adjacent properties make it unlikely that development will occur at a height or bulk which will, overall, impair access to light and air or the appearance of the separation between buildings, thereby making full setbacks unnecessary.

C) Exceptions may be allowed on lots with a frontage of less than 75 feet provided that (i) it is found that, overall, access to light and air will not be impaired and (ii) the granting of the exception will not result in a group of buildings the total street frontage of which is greater than 125 feet without a separation between buildings which meets the requirements of Chart A.

/a/ Development rights (TDR) would be transferred from 79 New Montgomery Street, 251 Front or 240 California. The FAR on the combined preservation and development sites would be less than 9:1. Downtown Plan excludes from FAR: mechanical and building service space; ground-floor internal circulation areas; and ground-floor and mezzanine-level convenience retail, personal service and restaurant space up to 75% of the area of the ground-floor interior; open space areas and required (pursuant to Section 309) replacement short-term parking.
/b/ In order to foster sculptured high-rise building tops, the Downtown Plan includes mandatory volume reductions for the upper part ("upper tower") and lower part ("lower tower") of a high-rise building.
/c/ Office Affordable Housing Production Program (OAHPP) (Ordinance No. 358-85).

SOURCE: Environmental Science Associates, Inc.; London & Edinburgh Trust and Skidmore, Owings and Merrill, San Francisco

The Downtown Plan includes four categories of architecturally significant buildings: Category I (significant buildings, retain essentially intact); Category II (significant buildings, additions to height at rear may be feasible); Category III (contributory buildings, outside a conservation district and of individual importance); and Category IV (contributory buildings, in a conservation district, encourage retention; allow replacement as a contributory building). TDRs may not be transferred to sites containing significant or contributory buildings, if development were to result in demolition or substantial

alteration of those buildings. The building on the project site is not listed in any of the categories. About 55,700 gsf of TDRs are proposed to be transferred to the project.

The project sponsor has development rights (in excess of those required for the proposed project) from three buildings under his control: 240 California St. (Tadich's Grill - Buich building); 79 New Montgomery and 251 Front (DeBernardi's - Royal Exchange). (All three are rated Category I in the Downtown Plan.) The overall FAR for the development and contributory lots would be 9:1 or less.

The above ground volume of the building would be about 224,505 sq. ft. The building would contain about 147,700 gsf of floor area applicable to the FAR of the building; as calculated under the Downtown Plan, the FAR of the project over the 10,220-sq.-ft. development site would be 14.5:1. Excluded from the FAR of the building are mechanical space, replacement short-term parking, and ground floor uses. (Personal services, retail and restaurant uses may not exceed 5,000 ft. per use and in total may not exceed 75% of the area of the ground floor; such uses must be located on the ground floor or, subject to the provisions of Section 309, on a mezzanine level.) Under Section 102.8(b)16, floor area for short-term parking, if required by the Planning Commission (pursuant to the provisions of Section 309) to replace short-term parking displaced by a project, would not be counted in the FAR calculation of the building. This report assumes that parking within the project would be considered short-term replacement parking pursuant to the provisions of Section 309./1/

The site is in a 450-S height and bulk district; the height limit is 450 ft. Structures up to 495 ft. are allowable under the provisions outlined for optional upper tower extensions. Section 263.9 states that the "additional height may be allowed pursuant to the provisions of Section 309 only to the extent it is determined that the upper tower volume is distributed in a way that will add significantly to the sense of the slenderness of the building and to the visual interest to the termination of the building, and that the added height will improve the appearance of the skyline when viewed from a distance, will not adversely affect light and air to adjacent properties, and will not add significant shadows to public open spaces." At 350 ft., the project would comply with the height limit. The S-Bulk designation controls building dimensions, floor sizes and bulk through Downtown Plan Bulk Control Zone Charts B and C. Essentially, these bulk controls

require setbacks, smaller floor sizes and slimmer building profiles with increased building height. The controls require a base zone, of height not exceeding 1.25 times the width of the widest abutting street, in this case, Pine St. (which is about 68.75 ft. wide), delineated by a setback, cornice or other architectural feature. The base of the project would be about 84 ft. tall, below the maximum height of 86 ft. allowed by the controls (1.25 x 68.75 = 86 ft.).

The project's lower tower would extend from the building base, at about 84 ft. to a height of about 210 ft.; the upper tower would extend above this, with a 25-ft.-tall mechanical penthouse on top. With a maximum floor area of about 8,250 sq. ft., a diagonal dimension of 145 ft. and a maximum length of 130 ft., the project would be within the lower tower bulk limits (a maximum floor area of 20,000 sq. ft., a maximum average floor area of 17,000 sq. ft., maximum diagonal dimension of 190 ft., and maximum length of 160 ft.) specified in the Downtown Plan. For a 350-ft.-tall building with a lower-tower floor size of about 8,250 sq. ft., the S-bulk controls require a volume reduction in the upper tower (above about 210 ft.) of about four percent; the project would have a volume reduction of about 4.2%.

Diagonal and length dimensions of the project (145 ft. and 130 ft, respectively) in the upper tower would be the same as in the lower tower, thus meeting the maximums of 190 ft. and 160 ft., respectively, permitted by the controls. With a maximum upper floor area of about 8,045 sq. ft., the project would be within the maximum areas specified by the controls (maximum average floor size of 12,000 sq. ft. and maximum floor area of 17,000 sq. ft.).

The Downtown Plan requires setbacks above the building base to allow for separation of, and light and air between, towers (Section 132.1(c)1). Above the base, the required setback is a minimum of 15 ft. from the interior property line or the center of a public right-of-way, as the case may be, up to a height of 300 ft.; above 300 ft. the setback requirement increases linearly up to a height of 550 ft., to a maximum of 35 ft. A building 350-ft.-tall would be required to be set back about 17 ft. from the interior property line at the top of the building. Above the base, the project would be set back about five ft. from the eastern and western property lines, and about six ft. from the southern property line. Exception to setback requirements is allowable under Section 132.1(c)2B and C of the City Planning Code (see Table 2, p. 46).

The sponsor would seek an exception to setback requirements, in accordance with the provisions of Section 309, under Section 132.1(c)2B and C of the Proposed Amendments to the City Planning Code to Implement the Downtown Plan. Subsection 132.1(c)2B allows exceptions "to the extent that it is determined restrictions on adjacent properties make it unlikely that development will occur at a height or bulk which will overall impair access to light and air or the appearance of separation between buildings thereby making full setbacks unnecessary;" Subsection 132.1(c)2C allows exceptions "on lots with a frontage of less than 75 feet provided that (i) it is found that, overall, access to light and air will not be impaired and (ii) the granting of the exception will not result in a group of buildings the total street frontage of which is greater than 125 feet without a separation between buildings . . . ."

On the west of the project site, a private, second-level garden terrace separates the project site from the 16-story Hong Kong Bank building (built in 1965); on the east is the Donahoe building, rated Category I in the Downtown Plan (see Figure 1, p.14). Abutting the site on the south, the Adam Grant and the Shell buildings are both rated Category I. The Downtown Plan prohibits demolition of Category I structures; it is thus unlikely that there will be any new construction on these sites. Three lots abutting the project site could be subject to development: the lot on the west end of the block immediately south of the Hong Kong Bank building is a narrow lot (40 ft. wide) which could not support a structure substantially taller than the existing six-story building. The other two lots east of the project site and south of the Donahoe building represent the most probable development adjacent to the site. The project lot is less than 75 ft. wide; if constructed, the project would not result in a group of buildings with a total Pine St. frontage greater than 125 ft. without a separation.

The Downtown Plan requires usable indoor or outdoor open space, accessible to the public, as part of new downtown development. The ratio of usable open space to new building space in the C-3-0 is one sq. ft. of open space for every 50 sq. ft. of development with an open space requirement, or about 2,950 sq. ft. for the project. The open space must be within 900 ft. of the project site. The project sponsor would comply with the open space requirements of the Downtown Plan by provision of open space off-site; he proposes to contribute towards the improvement of Commercial St. between Sansome and Montgomery St.

The Downtown Plan and the Planning Code require that shadows on publicly accessible open space be minimized (Section 147). New buildings are to be shaped, consistent with the dictates of good design and without unduly restricting the development potential of the site, to reduce substantial shadow impacts. Among the factors for the determination of shadow impact are: amount of area shaded; duration of the shadow; and the importance of sunlight to the utility of the type of open space being shaded. See Chapter IV, p. 61 for a discussion of the shadow impacts of the project.

The Downtown Plan requires that the project sponsor provide on-site child care facilities; the project sponsor would comply with this requirement.

The Downtown Plan requires (and the project sponsor would comply) contribution to public art equal to one percent of construction cost.

The Downtown Plan requires, and the project would provide, one off-street loading space.

SAN FRANCISCO MASTER PLAN

The project would respond to objectives and policies of the Commerce and Industry Element of the Master Plan. It would respond to Objective 1, Policy 1, to maintain and enhance a favorable business climate in the City. The project would increase on-site employment from six to about 600 jobs; about 2,420 additional jobs in other sectors of the Bay Area economy would result from the project./2/

The project is intended to respond to Objective 4, Policy 2, to promote and attract economic activities of benefit to the City. The project would respond to Objective 6, to support San Francisco as a "prime location for financial, administrative, corporate, and professional activity". The project would respond to Policy 1 of this Objective, to encourage continued growth of downtown office activity.

Policy 2 of Objective 6 guides "office development to maintain a compact downtown core so as to minimize displacement of other viable uses". The project would respond to Policy 2 because it would be an infill project close to a major downtown transit center. The project would respond to Policy 4 of Objective 6 of the Commerce and Industry

Element to provide "amenities for those who live, work and use the Downtown" by provision of retail space on the ground level and contribution to improvement of Commercial St. as a part-time pedestrian street.

NOTE - Land Use and Zoning

/1/ If parking within the project were not considered replacement short term parking, Section 204.5(c) of the City Planning Code would apply. Under this section, seven percent of the total gross floor area of the structure may be allowed as an accessory parking facility, and excepted from FAR calculations; parking area in excess of the seven percent limit would require Conditional Use authorization and would apply to the FAR.

/2/ Indirect employment based on A 1980 Hybrid Input-Output Model for the San Francisco Bay Region, Association of Bay Area Governments, April 1984. A multiplier of 4.04 was used for finance, insurance and real estate (FIRE) sector jobs.

B. URBAN DESIGN

The project would replace a three-story parking garage with a high-rise structure (see Figures 12 and 13, pp. 54 and 55).

The Urban Design Element of the San Francisco Master Plan contains policies and principles which may be used to evaluate the proposed project. Table 3, p. 56, Relationship Between Applicable Urban Design Policies of the Master Plan and the Proposed Project, compares the project to these policies.

The building design would be a three-part composition: the base (ground-floor, service level and parking levels); a middle shaft (floors seven through 20); and a top (levels 21 through 24 and a mechanical level and penthouse). The base would be similar in scale to the Donahoe building to the east and relate to the existing street wall height. The project would be built to property lines at the base (to a height of 84 ft.); it would be set back from all property lines by about five ft. above the base. Above 84 ft., the tower would project straight up to, and including the 24th floor. At the 25th mechanical level, the four corners of the building would be chamfered (cut diagonally away from the edge). On the east and west faces, beginning at the seventh floor two rectangular indentations would extend vertically up the sides of the building to the 23rd level, where three larger indented rectangular bays would extend vertically to the lower half of the mechanical penthouse (25th) level. Within each indented rectangle, triangular projections would

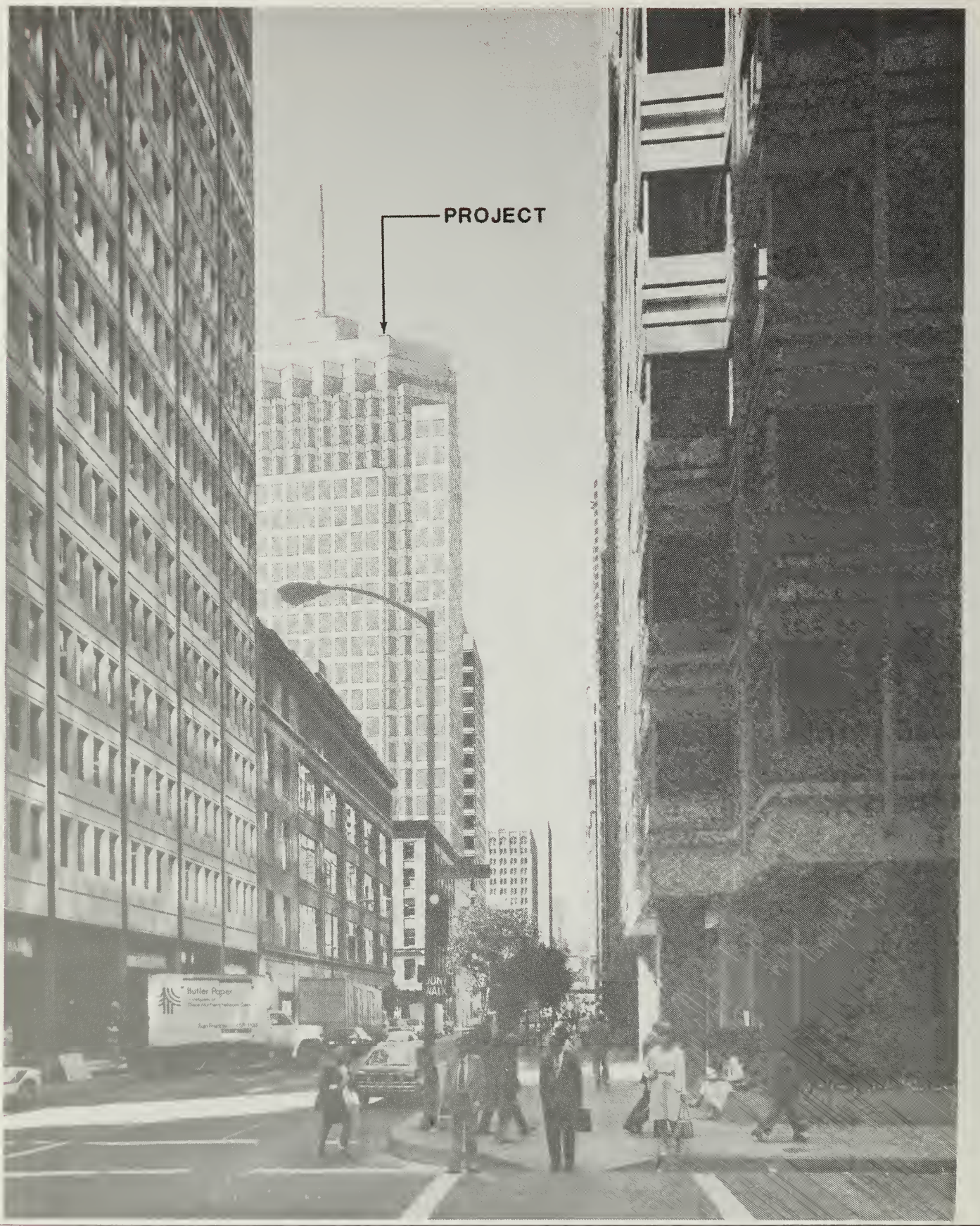


FIGURE 12
235 PINE STREET PHOTOMONTAGE
OF PROJECT FROM NORTHEAST
CORNER OF PINE/FRONT INTERSECTION

SOURCE: SKIDMORE, OWINGS AND MERRILL

FIGURE 13
235 PINE STREET PHOTOMONTAGE
OF PROJECT FROM NORTHWEST
CORNER OF PINE/SANSOME INTERSECTION

SOURCE: SKIDMORE, OWINGS AND MERRILL

TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE MASTER PLAN AND THE PROPOSED PROJECT

URBAN DESIGN PLAN POLICIES	RELATIONSHIP OF PROJECT TO POLICIES
Objective 1, Policy 1 - "Recognize and protect major views in the City, with particular attention to those of open space and water." (p. 10)	The project site is located along Pine St., a major designated view corridor. The project would not block views along the corridor, nor would it obstruct any public views of the Bay.
Objective 1, Policy 3 - "Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts." (p. 10)	The proposed 350-ft.-tall project would be taller than the 85-ft.-tall Donahoe building and the 258-ft.-tall Hong Kong Bank building (immediately east and west of the site); it would be about 250 ft. shorter than the new 345 California St. building and about 20 ft. shorter than the Shell building.
Objective 1, Policy 6 - "Make centers of activity more prominent through design of street features and by other means." (p. 12)	The project would increase the visual prominence of the site and pedestrian interest compared to the existing unembellished concrete garage. It would include ground-level retail space and public art visible to passing pedestrians and drivers.
Objective 2, Policy 4 - "Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development." (p. 25)	The building on the site is not a landmark, does not have significant or contributory status under the Downtown Plan, and was not rated in the City's 1976 or the Heritage architectural surveys. Through the use of TDRs, the project would preserve a significant or contributory building elsewhere in the C-3-0.
Objective 2, Policy 6 - "Respect the character of older development nearby in the design of new buildings." (p. 25)	The height of the base is intended to complement the adjacent Donahoe building and the base of the Hong Kong Bank building. The project would be faced in medium-value granite, intended to complement building materials of adjacent structures.

(Continued)

TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE MASTER PLAN AND THE PROPOSED PROJECT

URBAN DESIGN PLAN POLICIES	RELATIONSHIP OF PROJECT TO POLICIES
Objective 3, Policy 1 - "Promote harmony in the visual relationships and transitions between new and older buildings." (p. 36)	The proposed 350-ft.-tall project would be taller than the 85-ft.-tall Donahoe building and the 258-ft.-tall Hong Kong Bank building (immediately east and west of the site); it would be about 250 ft. shorter than the new 345 California St. building and about 20 ft. shorter than the Shell building. Thus, the project would be a transition in scale among surrounding buildings. Articulated columns and bays are intended to emphasize the slenderness of the project building.
Objective 3, Policy 2 - "Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance." (p. 36)	The project is intended to be similar in shape to nearby buildings; the building materials would be chosen so as to complement surrounding older structures.
Objective 3, Policy 3 - "Promote efforts to achieve high quality of design for buildings to be constructed at prominent locations." (p. 36)	The building would include architectural features intended to complement adjacent development and to be in character with existing high-rise development in the C-3 District of San Francisco.
Objective 3, Policy 4 - "Promote building forms that will respect and improve the integrity of open spaces and other public areas." (p. 36)	The project would contribute to the off-site improvement of Commercial St. between Sansome and Montgomery Sts. as a part-time pedestrian street. There would be no open space on-site.
Objective 3, Policy 5 - "Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development." (p. 36)	The project would be taller and more visible than existing structures along the south frontage of Pine St. At 25 stories, it would be intermediate in scale among newer high-rise buildings, such as the 19-story 111 Pine St. building and the 33-story 100 Pine St. building. The project would be taller than older, shorter buildings such as the six-story Donahoe building on the east, and about 20 ft. shorter than the Shell building to the south. The project would be shorter than the 48-story 101 California building, one- and one-half blocks east of the site, and the 47-story California St. building across Pine St. from the site.

(Continued)

TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE MASTER PLAN AND THE PROPOSED PROJECT (Continued)

URBAN DESIGN PLAN POLICIES	RELATIONSHIP OF PROJECT TO POLICIES
Objective 3, Policy 6 - "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." (p. 37)	The project would be within the bulk limits designated for the site by the Downtown Plan. The upper tower would have a volume reduction of about 4.2% (a four percent reduction is required).
DOWNTOWN PLAN - URBAN FORM CHAPTER - POLICIES	
"Relate the height of buildings to important attributes of the city pattern and to the height and character of existing and proposed development." (p. 84)	The proposed 350-ft.-tall project would be taller than the 85-ft.-tall Donahoe building and the 258-ft.-tall Hong Kong Bank building (immediately east and west of the site); it would be about 250 ft. shorter than the new 345 California St. building and about 20 ft. shorter than the Shell building.
"Foster sculpturing of building form, less overpowering buildings and more interesting building tops." (p. 84)	The project would feature triangular vertical projections above the 21st floor and chamfered corners on the top level to reduce the appearance of bulk.
"Maintain separation between buildings to preserve light and air and prevent excessive bulk." (p. 96)	The project would be set back about 10 ft. less than the required amount of 15 ft. above the base, and 12 ft. less than the required 17 ft. at the building top from interior property lines.
"Assure that new buildings contribute to the visual unity of the City." (p. 105)	The project would incorporate a defined base element of similar height to those of the adjacent Donahoe building and the base of the Hong Kong Bank building, and the project is intended to relate to surrounding buildings, primarily the Shell building.

(Continued)

TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE MASTER PLAN AND THE PROPOSED PROJECT (Continued)

DOWNTOWN PLAN URBAN FORM POLICIES	RELATIONSHIP OF PROJECT TO POLICIES
"Encourage more variation in building facades and greater harmony with older buildings through use of architectural embellishments and bay or recessed windows." (p. 105)	The project would be set back above the building base and would include vertical projections on the east and west facades. Corners at the building top would be chamfered (cut diagonally away from the edge). The front facade of the building above the entrance and below the first office level would include a piece of art.
"Conserve the traditional street to building relationship that characterizes downtown San Francisco." (p. 106)	The building's base would define a streetwall height relating to existing older development nearby (including the Donahoe building).
"Provide setbacks above a building base to maintain the continuity of the predominant streetwalls along the street." (p. 106)	The proposed setback above the base would maintain the continuity of the existing streetwall.
"Maintain and enhance the traditional downtown street pattern of projecting cornices on smaller buildings and projecting belt courses on taller buildings." (p. 107)	The project would not incorporate a projecting belt course; the project would have a horizontal projection over the pedestrian and vehicle entrances on Pine St.
"Use design and materials and include activities at the ground floor to create pedestrian interest." (p. 107)	The entry, which would incorporate some architectural detailing, and possibly public art, and the retail space on the ground floor would create pedestrian interest, compared with the existing garage use on the site.

SOURCE: Urban Design Element, San Francisco Master Plan, 1971; Downtown Plan; Environmental Science Associates, Inc.

extend vertically up the building face. At the center of the Pine St. elevation a single indented bay with central triangular projections would extend from the 23rd floor to the 24th floor.

The project would have a horizontal projection over its vehicle and pedestrian entrances that would correspond in height to the lower cornice of the Donahoe building and the base of the Hong Kong Bank building. Parking levels would not have windows; to provide visual interest, the base element on the Pine St. frontage above the entrance would have deeply indented vertical joinings between granite panels and would feature a central indented rectangular bay with triangular vertical projections. The project sponsor intends to have a work of art (to fulfill the Downtown Plan requirement), placed on the front portion of the building, above the entrance. On the east, west and south facades up to the ninth floor, and on the Pine St. facade above about the sixth to the ninth floors, the edges of the granite panels would be emphasized to provide visual differentiation. Above the parking levels, the building would have regularly spaced windows, flush with the granite facade. Above the 21st floor, on the north, east and west faces, a central indented rectangle with triangular vertical projections would articulate the facade, to provide interest and reduce the appearance of boxiness. The east and west facades would have two widely spaced indented bays, encompassing two window widths, extending vertically from the first office level to the 21st, where they would meet the larger indented rectangle. Dual triangular projections would extend the length of each indented bay. The mechanical level would have chamfered corners intended to reduce the appearance of bulk. Project design elements would be subject to review by the Department of City Planning under Planning Code Sections 309 and 321.

The 25-story building would be taller and more visible than most existing structures on the project block, such as the 16-story Hong Kong Bank building and the six-story Donahoe building both adjoining the site. It would be 20 ft. shorter than the Shell building. It would be of intermediate scale compared with newer high-rise buildings, such as the 19-story 111 Pine St. building, and the 33-story 100 Pine St. building, both located one block east of the site. It would be shorter than the 47-story 345 California St. building across Pine St. and the 48-story 101 California St. building located one- and one-half blocks east of the site.

The project would not degrade or obstruct any scenic view or vista now observed from public areas. Pine St. is a designated view corridor for views towards the Bay; east along

Pine St. the view is terminated by the PG&E building (77 Beale St.) on the southern side of Market St. The project would not block views along the view corridor; nor would it obstruct any public views of the Bay. The project would not block any scenic views now observed from public areas. It would block some views of the upper portion of the Shell building from points on Pine St. in the project vicinity. The project would block views from the Hong Kong building eastward; it would block views north from upper floors of the Shell building. The project would be visible from 345 California St., and would block some of its views of the Shell building from lower stories. The project would not be visible from Market St. A portion of the eastern facade of the project would be visible beyond the Shell building from points along the eastern sidewalk of First St.

C. SHADOW AND WIND

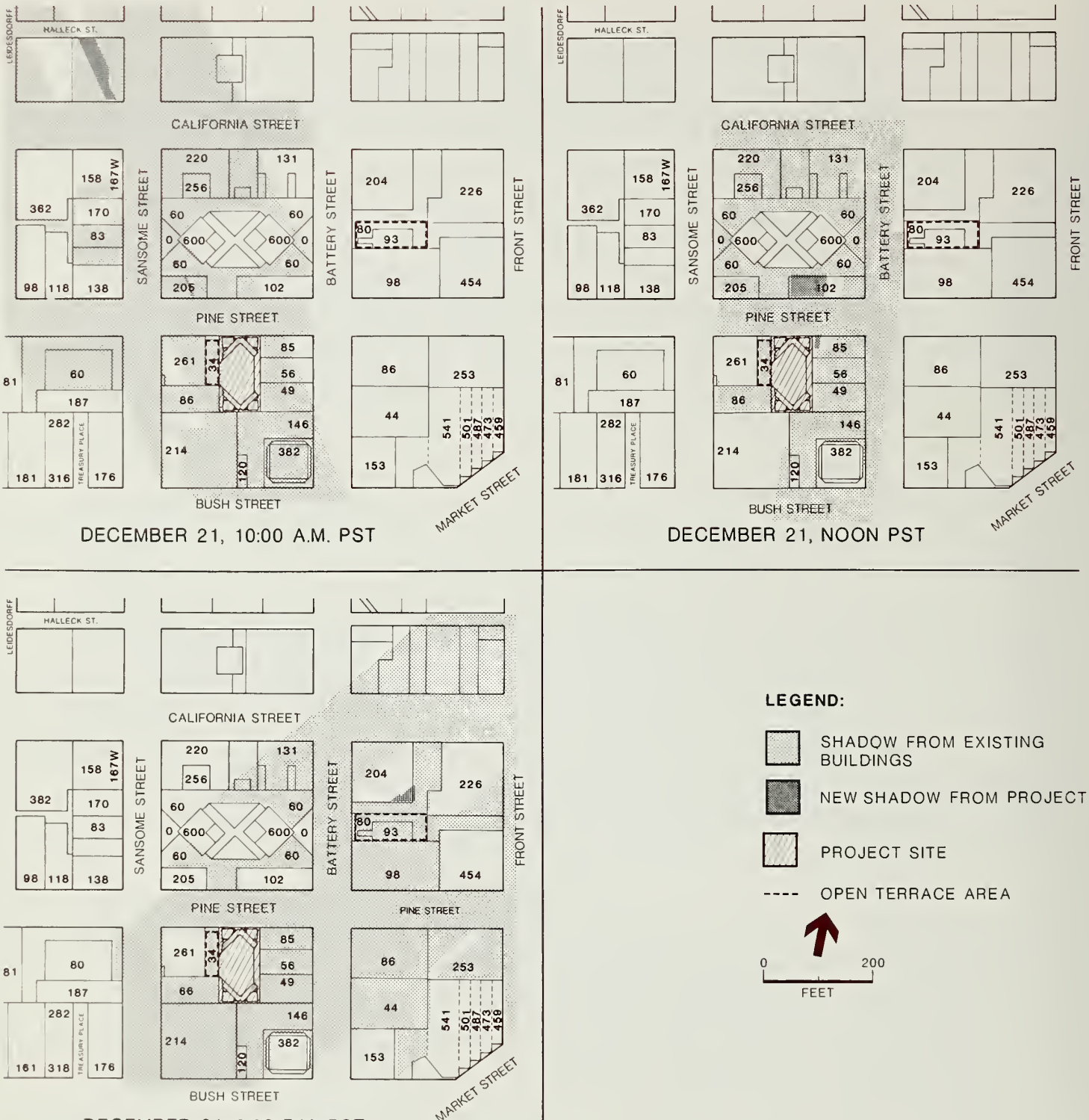
SHADOW

Shadow patterns for the project are shown in the following figures for 10:00 a.m., noon and 3:00 p.m. for the four seasons. The diagrams show existing and proposed building shadow and net new shadow from the project.

December 21 (see Figure 14, p. 62) at 10:00 a.m., noon, and 3:00 p.m., the proposed project would add no new shadow to any streets or sidewalks, only to rooftops in the vicinity.

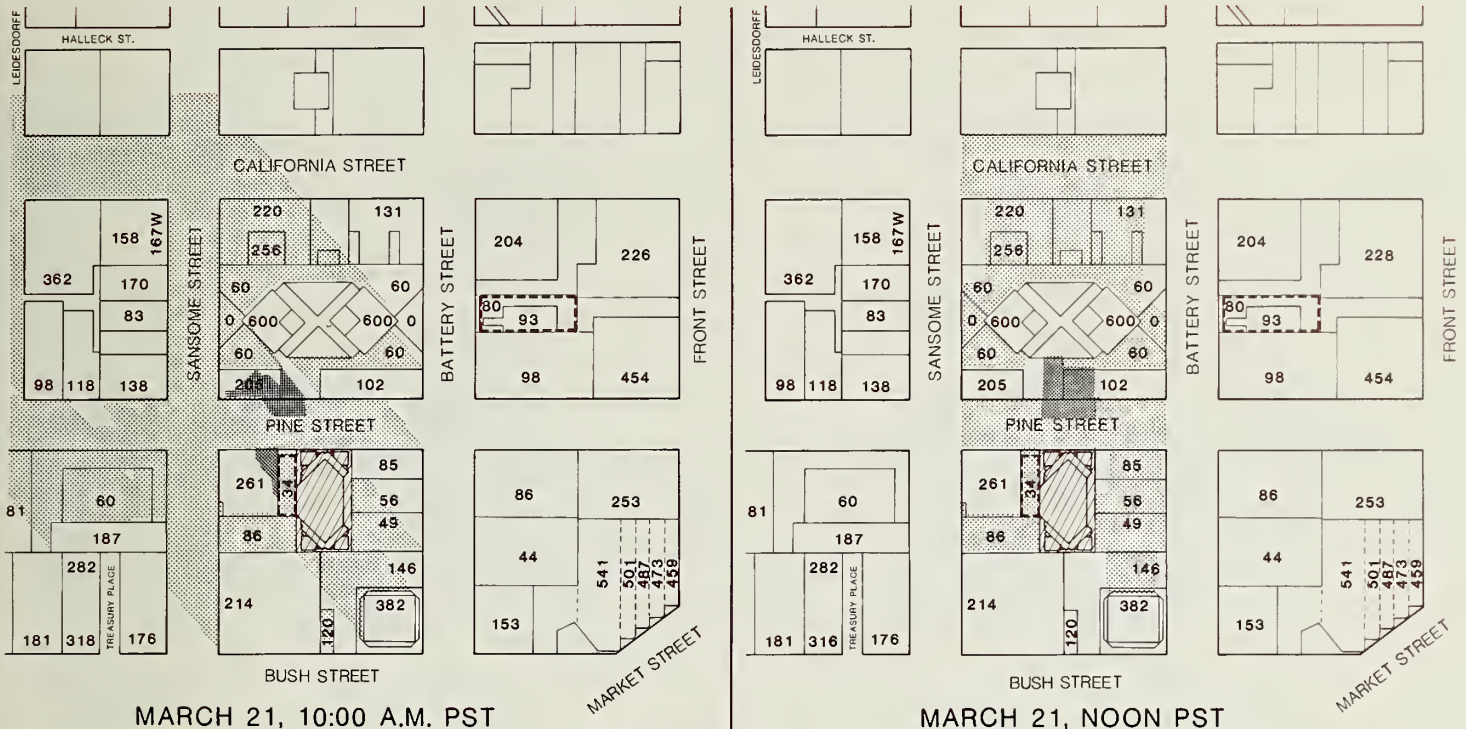
March 21 (see Figure 15, p. 63) at 10:00 a.m. Pacific Standard Time (PST) and noon, the project would add new shadow to Pine St. and its northern sidewalk across from the project site, part of the 345 California loading entrance, and to rooftops on the block north of the site. At 3:00 p.m., the project would add new shadow to Pine St. and its northern sidewalk between Battery and Front Sts., at the same time shading rooftops of buildings east and northeast of the site.

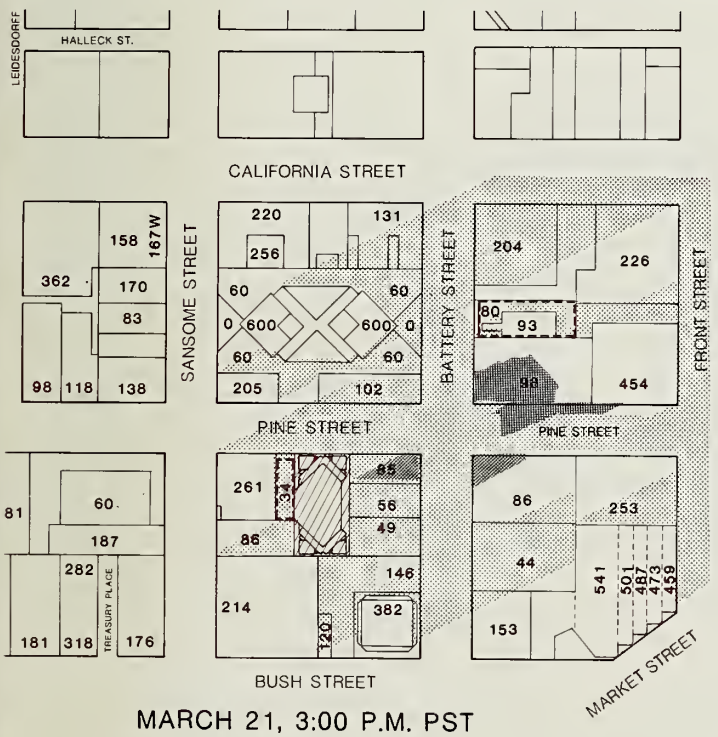
June 21 (see Figure 16, p. 64) at 10:00 a.m. Pacific Daylight Time (PDT), the project would add new shadow to the Pine/Sansome intersection and rooftops west of the site. At noon, the project would add new shadow to about 85% to 90% of the Hong Kong Bank second level garden terrace (the terrace abuts the project site on the west), so that the terrace would be completely shaded at this time. The Hong Kong Bank garden terrace is a



SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES

FIGURE 14
235 PINE STREET
PROJECT SHADOW PATTERN
DECEMBER 21





LEGEND:

- SHADOW FROM EXISTING BUILDINGS
- NEW SHADOW FROM PROJECT
- PROJECT SITE
- ---- OPEN TERRACE AREA

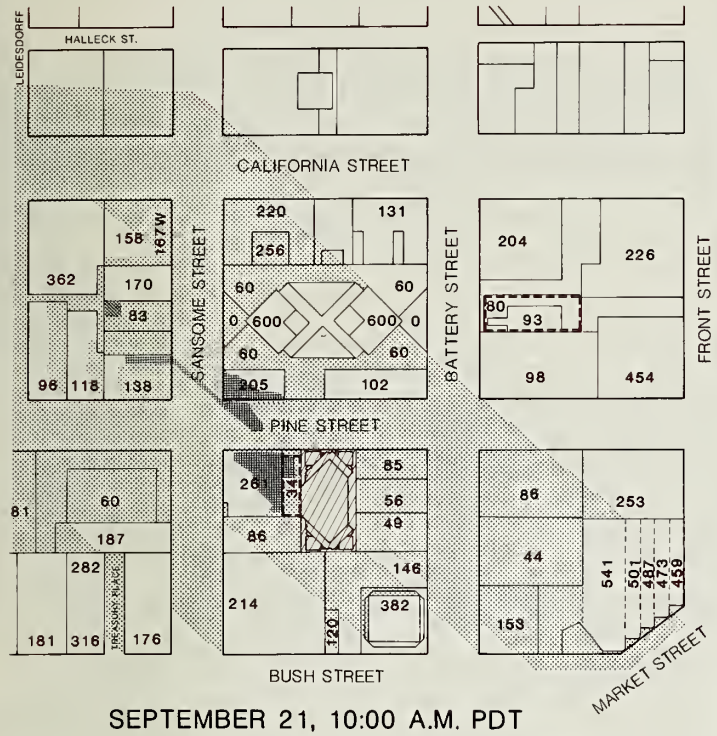
0 200
FEET

FIGURE 15
235 PINE STREET
PROJECT SHADOW PATTERN
MARCH 21

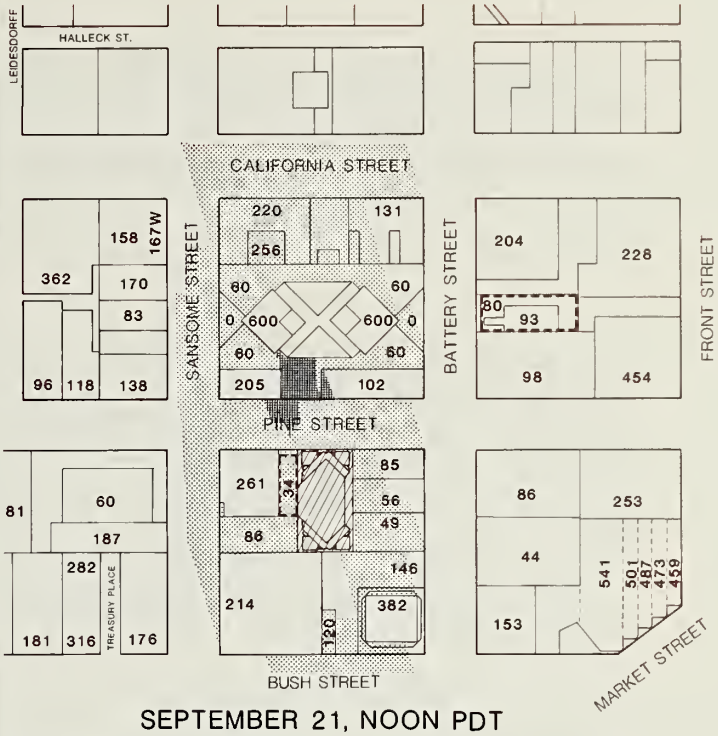
SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES

FIGURE 16
235 PINE STREET
PROJECT SHADOW PATTERN
JUNE 21.

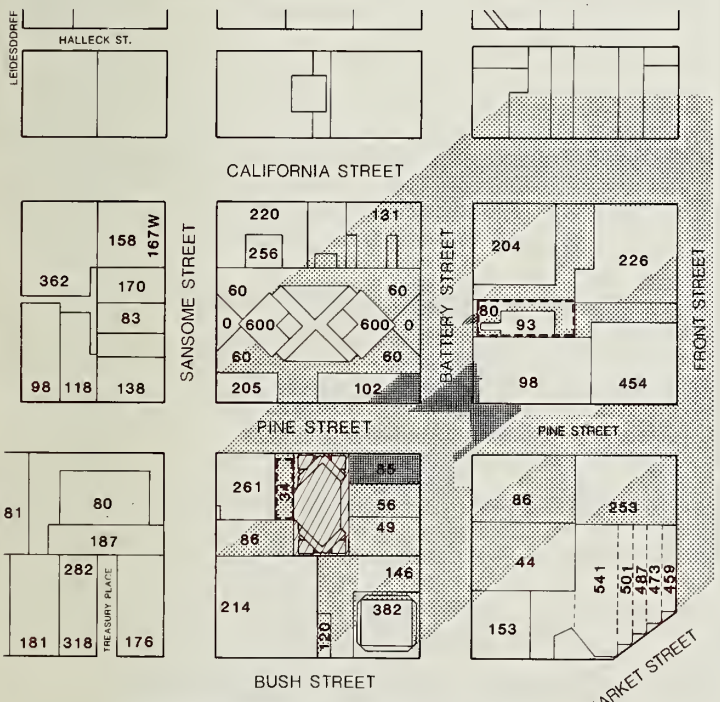
SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES



SEPTEMBER 21, 10:00 A.M. PDT



SEPTEMBER 21, NOON PDT



SEPTEMBER 21, 3:00 P.M. PDT

LEGEND:

- SHADOW FROM EXISTING BUILDINGS
- NEW SHADOW FROM PROJECT
- PROJECT SITE
- ---- OPEN TERRACE AREA

0 200
FEET

FIGURE 17
235 PINE STREET
PROJECT SHADOW PATTERN
SEPTEMBER 21

SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES

private open space used by second floor tenants of the building (Hong Kong and Shanghai Banking Corporation) only. It is used as a visual amenity; it is not used as a sitting area./1/ Also at this time, the project would add new shadow to Pine St. and its northern sidewalk in front of the site. At 3:00 p.m. in June, the project would add new shadow to Pine and Battery Sts. northeast of the site (and to rooftops in that direction).

September 21 (see Figure 17, p. 65) at 10:00 a.m. (PDT), the project would add new shadow to Pine St and its northern sidewalk northwest of the site (and to rooftops in that direction), and a narrow strip of shadow across Sansome. The project would result in the Hong Kong Bank second level garden terrace being completely covered by shadow by adding about 30% new shadow at this time. At noon, the project would add new shadow to Pine St. and its northern sidewalk across from the project site and the 345 California loading entrance (and also rooftops in that direction). At 3:00 p.m., the project would add shadow to the Pine/Battery intersection, and to sidewalks in the vicinity (and to rooftops east and northeast of the site).

Shadow and Open Space

Open space in the project area that could be affected by the project includes the private sun terrace adjoining the site on the west; 130 Battery (a private roof garden); the 101 California Plaza; and Justin Herman Plaza. The Crown Zellerbach Plaza and Mechanic's Plaza are within one block of the site. Of these open space areas, the project would affect only the adjacent private sun terrace, as discussed above. Maximum project effects would occur at noon in June. Project effects would be less at other times of the year and would occur during morning hours during spring and fall.

PROPOSITION K

In June 1984, the voters of the City and County of San Francisco approved Proposition K, the Park Shadow Ban initiative ordinance prohibiting the issuance of building permits for structures that would shade property under the jurisdiction of or designated to be acquired by, the Recreation and Park Commission unless the City Planning Commission determines that such shade would have an insignificant adverse impact on the use of such property.

The project would add no new shadow to any property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission, during the hours

specified by Proposition K. Detailed shadow diagrams showing the maximum extent of project shadow toward potentially affected property are on file and available for public review at the Department of City Planning, 450 McAllister St., Fourth Floor.

WIND/2/

Prevailing winds in San Francisco are from the northwest, west-northwest, west, and west-southwest. Wind tunnel measurements were made at 16 surface locations near the project site for each of the prevailing wind directions using a scale model of the site, the project and vicinity. The study included separate tests of northwest, west-northwest and west winds under existing conditions (345 California, nearing completion, and the approved Embarcadero Center West (ECW) were included in the existing scenario), and future conditions with the project in place.

Wind test data were combined with wind records to predict the wind speeds that would be exceeded 10% of the time at each test location. The predicted winds were then compared to the comfort and hazard criteria in the Planning Code, established in the Downtown Plan. (See Appendix B, p. A-34 for a summary of the full wind analysis.) Throughout the following discussion, the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time./3/

Existing wind speeds are five to eight mph at the 16 locations tested. (See Appendix B, Figure B-1, p. A-36, for a figure showing the locations of, and wind speeds at, the test points. Existing winds at all of these locations meet the 11 mph comfort criterion.

The project would cause wind speeds to increase at six of the 16 test locations (by between one and four mph), to remain the same at four locations, and to decrease at six locations (by between one and two mph). The maximum increase would be to nine mph, across Pine St. from the site, at the 345 California loading dock. Winds would meet the 11 mph comfort criterion at all locations. The seven mph comfort criterion for seating areas is not applicable as there are no identified seating areas in the project area tested.

NOTES - Shadow and Wind

/1/ Eileen Gnabisik, the Hong Kong and Shanghai Banking Corporation, interview, March 11, 1985.

/2/ This section is based on a study entitled Wind Tunnel Study (Addendum) of the 235 Pine Street Building, December 1985, prepared by Dr. Bruce White for Environmental Science Associates, Inc. A summary of the report is included in Appendix B, p. A-34; the complete report is on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., Sixth Floor.

/3/ Equivalent windspeed is an hourly wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians.

D. CULTURAL RESOURCES

An archaeological resources report titled "Cultural Resources Evaluation of 235 Pine Street" was prepared for the project site by Allen G. Pastron, consulting archaeologist, and is on file with the Office of Environmental Review, Department of City Planning, 450 McAllister St./1/

The investigation conducted suggests the presence of potentially significant cultural resources/artifacts on the site, dating from the Gold Rush. The project site was located along the San Francisco waterfront during 1849; archival research indicates that it is unlikely that the remains of a ship would be found on the site. Archaeological remains dating from the Gold Rush period (circa 1849-1857) could exist on the project site. Resources could include architectural remnants, trash pits, privies and other scattered cultural objects. Such a find could be considered of potential archaeological and historic significance. Relics from the City Building period (1858-1886), Late-Nineteenth-Century period (1887-1906) and Twentieth-Century period would probably be encountered within the project area (archival research did not reveal anything at the site within these time periods considered to be of potential significance). The building on the site dates from the Twentieth Century Period. The proposed project would probably include excavation to about nine ft. below the San Francisco City Datum (SFD), about one foot below the existing basement.

The report suggests that there is little likelihood of encountering archaeological resources from the prehistoric, Spanish or Mexican periods (ca. 8000 B.C.-1845 A.D.) on the project site. It is doubtful that cultural remains from the early American period (1846-1848) would be recovered, as the project site remained in an undeveloped state throughout those years.

Excavation and piledriving for the proposed project might intrude upon remains of the Gold Rush period and might damage such resources irretrievably. Further investigation would be needed to determine means of preserving or removing resources intact, if they were encountered (see mitigation measure, p. 92).

NOTE - Cultural Resources

/1/ An archival search was conducted for the project by Allen Pastron, Ph.D, November 1984; the resulting cultural resources report entitled Cultural Resources Evaluation of 235 Pine Street, San Francisco, is on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, Sixth Floor, San Francisco, California, 94102.

E. TRANSPORTATION

The analysis below includes a brief summary (summaries) of the materials in the Downtown Plan EIR. This summarized material is incorporated by reference as follows:

VOLUME 1: FINAL EIR TEXT.

I. SUMMARY. E. Transportation and Circulation; Travel Demand, Public Transportation, Traffic, Parking, Pedestrian Circulation, Mitigation (pp. I.E.1-I.E.6).

IV. ENVIRONMENTAL SETTING AND IMPACTS OF THE DOWNTOWN PLAN. E. Transportation and Circulation; Introduction (pp. IV.E.1-IV.E.3); Setting (pp. IV.E.3-IV.E.20): Travel Demand Analysis, Transit, Traffic, Parking, Pedestrian Circulation; Impacts (pp. IV.E.20-IV.E.47): Travel Demand Analysis - 1990 Impacts, 2000 Impacts; Transit - 1990 Impacts, 2000 Impacts; Traffic - 1990 Impacts, 2000 Impacts; Parking - 1990 Impacts, 2000 Impacts; Pedestrian Circulation - 1990 Impacts, 2000 Impacts; Parking - 1990 Impacts, 2000 Impacts

V. MITIGATION OF ENVIRONMENTAL IMPACTS (pp. V.E.1-V.E.30). E. Transportation and Circulation: Annual Growth Rate Limits, Measures Proposed as Part of the Downtown Plan

VI. ALTERNATIVES (pp. VII.E.1-VII.E.4). E. Transportation and Circulation: Travel Demand, Public Transportation, Traffic, Parking, Pedestrian Circulation

VOLUME 2: APPENDICES (pp. J.1-J.38). J. Transportation and Circulation Analyses and Methodologies: Introduction, C-3 District Employer/Employee Survey Travel Demand Analysis, Future Transit Capacities, Service Vehicles, Pedestrian Circulation

VOLUME 3: SUMMARY OF COMMENTS AND RESPONSES (pp. C&R 1-Z.4). Part 1: Responses

The Downtown Plan EIR (Final EIR, EE81.3, certified October 18, 1984) is available for review at the Department of City Planning, the San Francisco Main Public Library, and various branch libraries.

DEMOLITION, EXCAVATION, AND CONSTRUCTION TRAFFIC/1/

During the projected 20-month construction period, transportation impacts would result from truck movements to and from the site during demolition, excavation, and construction activity. Demolition would require about four weeks and excavation would require about six weeks; these activities would generate an average of ten truck movements per day in or out of the project site, between 9:00 a.m. and 3:30 p.m. Trucks would use Pine St. to Sansome St. to the Clay St. on-ramp of the Embarcadero Freeway to haul debris and excavation materials to a disposal site in South San Francisco. Construction activities (steel erection and finishing) would also generate an average of 10 truck movements per day during a 16-month period. Deliveries of materials would occur between 9:00 a.m. and 3:30 p.m. Parking impacts from construction workers would occur in proportion to the number of workers driving to the site.

Construction truck access to the site would be from Pine St. The south sidewalk on Pine St. would be closed for about 18 months and pedestrians would be routed through a protected walkway in the curb (parking) lane. Closure of the curb lane on the south side of Pine St. along the project frontage would result in a reduction of capacity on Pine St. (There is a no-stopping restriction on the south side of Pine St. from 7:00 a.m. to 6:00 p.m.) The reduction in capacity would slow movement of traffic, including Muni buses (the 1-California Express, 38-Geary Express, 12-Folsom, 31-Balboa Express and 42-Downtown Loop run along Pine St. in front of the site).

In addition, the impact of construction truck traffic would be a slight lessening of the capacities of access streets and haul routes because of the slower movements and larger turning radii of trucks. Any truck traffic from 7:00 a.m. to 9:00 a.m. or from 4:00 p.m. to 6:00 p.m. would coincide with peak-hour traffic, particularly at freeway access points, and would serve to worsen service levels. As noted above, truck traffic would be restricted to the hours of 9:00 a.m. to 3:30 p.m. which would avoid such peak period effects.

The 345 California St. project (formerly 333 California: EE81.249 and 84.565E) on the block north of the project site is now under construction. A portion of this project fronts on Pine St. and is used for construction truck access. Construction of the 345 California St. project is expected to be completed by February 1986, and construction of the 235 Pine St. project is expected to begin in mid-1986. Thus, the construction phases of these two projects would not overlap.

PROJECT IMPACTS

Travel Demand

On the basis of land use trip generation factors, the project would generate about 3,044 net new person trip-ends (pte) per day./2/ The trip generation calculations include travel to and from the project site by both visitors and employees of the project. Additionally, although expressed on a person trip-end basis, the trip generation includes all travel to and from the project in autos, service vehicles and trucks, on public transit and other modes (i.e., walking, bicycles, taxis, etc.). Projected outbound (peak commute direction) p.m. peak-period and peak-hour trips by mode expected to be generated by the project are shown in Table 4, p. 72. About 460 new outbound trips from the project would occur during the p.m. peak-period, of which about 290 would occur in the p.m. peak hour./3/

Assignments to travel modes for the project have been made on the basis of modal splits from the Downtown Plan EIR (EE 81.3) for the years 1984 and 2000./4/ The 1984 modal split has been used for the purpose of identifying impacts at the single-project level (as opposed to impacts at the cumulative level). The year 2000 modal splits have been applied to the project travel for the purpose of comparing project travel with cumulative future travel demand on the transportation systems serving San Francisco. The modal splits used were derived from aggregate data for the C-3 District, the zoning district that contains the project site, and thus represent an average condition. The actual modal split for travel from the project may vary from the C-3 District average. However, because the travel demand forecasts used to derive the average modal split data implicitly include the travel from the project, application of the average modal split data to project travel has been assumed to be sufficiently accurate for purposes of comparison.

TABLE 4: PROJECTED OUTBOUND TRAVEL DEMAND BY MODE FROM 235 PINE STREET (pte/a/)

Travel Mode	P.M. Peak Period/b/ 1984	P.M. Peak Period/b/ 2000/c/	P.M. Peak Hour /b/ 1984	P.M. Peak Hour /b/ 2000/c/
Drive Alone	75	65	50	40
Car/Vanpool	60	70	45	45
Muni	125	110	65	60
BART	70	85	50	60
AC Transit	25	25	15	15
Samtrans	5	5	5	5
SPRR (Caltrain)	10	10	5	10
GGT Bus	15	15	10	10
Ferry	5	5	5	5
Walk Only	60	60	35	35
Other	10	10	5	5
TOTALS (rounded)	460	460	290	290

/a/ Person trip-ends.
/b/ The peak hour occurs during the two-hour peak period of 4:00 to 6:00 p.m.
/c/ The year 2000 modal split accounts for changes in travel behavior which are assumed to occur as a result of growth in downtown San Francisco.

SOURCE: Environmental Science Associates, Inc.

Parking demand was projected for the 235 Pine St. project on the basis of the estimated vehicle traffic generated by the project. The project's land uses would create net new demand for about 115 long-term spaces and 8 short-term spaces, for an equivalent net new daily demand of 123 spaces.

The project would respond to Objective 1, Policy 7 of the Transportation Element of the San Francisco Master Plan, to "seek means to reduce peak travel demand."/5/ As required by Section 163 of the City Planning Code, a member of the building management staff would be designated as a "transportation broker" to coordinate measures that are part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak-period congestion by a planned

spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, Muni, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for carpool and vanpool information.

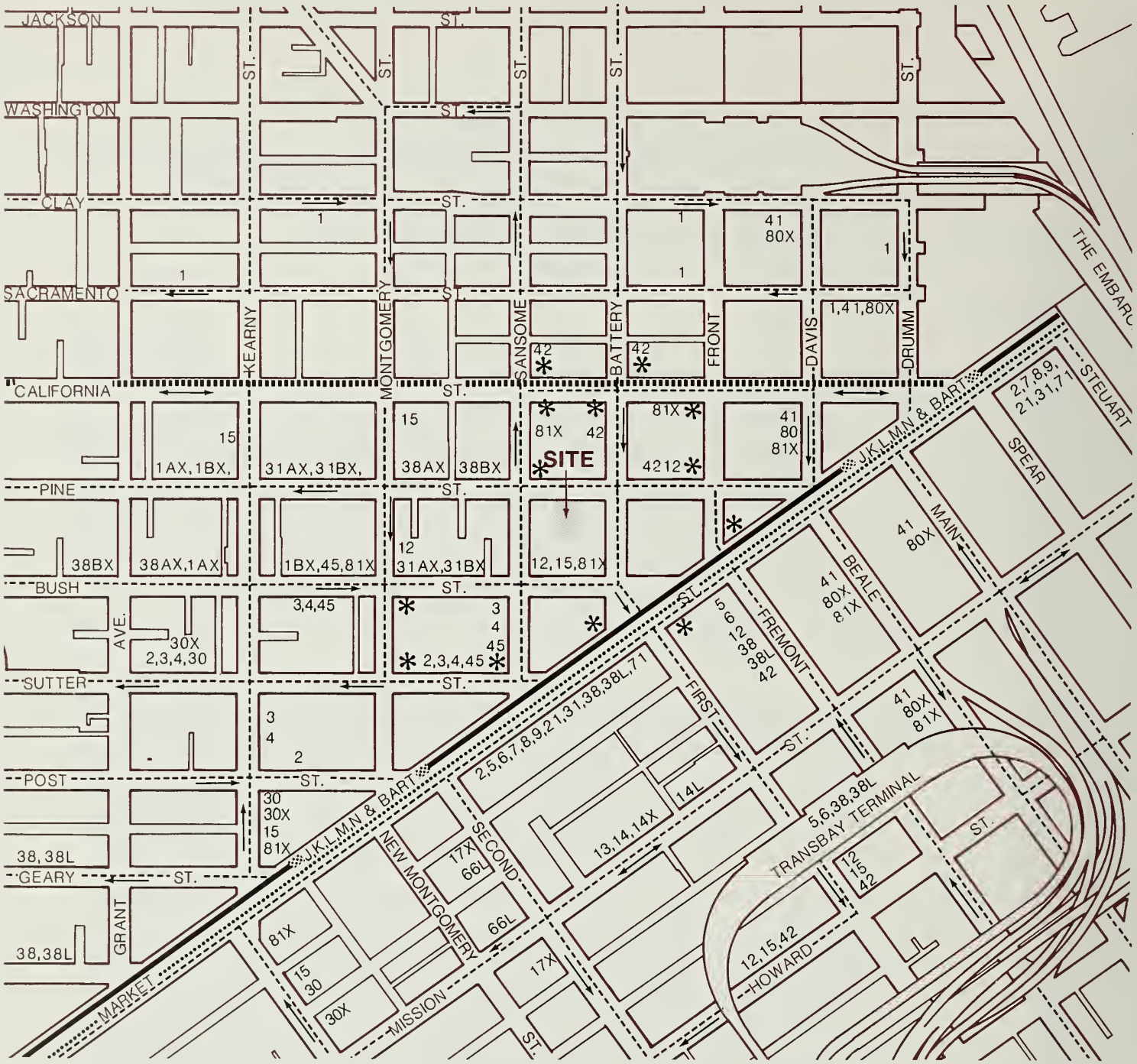
Local Transit

The closest Muni bus stops to the project site area are at the intersections of Pine and Battery Sts. and Pine and Sansome Sts., serving the 42-Downtown Loop, 12-Folsom, 38-Geary Express, 31-Balboa Express and 1-California Express lines. Muni Metro and BART service in the Market St. subway are accessible via the Montgomery St. station (about two blocks southwest of the site), and the Embarcadero Station (about three blocks east of the site). Figure 18 shows Muni and BART routes in the project area. Photographic examples of p.m. peak-hour loadings on Muni vehicles are shown in Appendix C, Figure C-1, p. A-38.

During the p.m. peak hour in 1984, all of the transit agencies were found to be operating in Level of Service D or better, with the exception of BART Transbay where conditions were found to be at Level of Service F, and MUNI in the northwest and southwest corridors, where operations were found to be in LOS E. Table C-1, Appendix C, p. A-37, contains descriptions of the various Levels of Service for bus transit. In the p.m. peak hour, the project would generate about 65 new Muni trips and about 50 new BART trips outbound from the project site. Addition of the project p.m. peak-hour Muni riders to the existing (1984) Muni ridership would not increase the loading ratios on any corridors, and thus would not change the Levels of Service. The number of Muni riders from the project would not be sufficient to affect Muni operations in any of the four corridors. Addition of BART riders from the project to the existing BART ridership would not increase p.m. peak hour transbay or westbay loading ratios or change Levels of Service.

Transit Corridor Analysis

The project would contribute to increases in transit ridership in the major transit corridors leading from downtown San Francisco. Existing peak-period and peak-hour transit ridership would be increased by about 0.1%. A ridership increase of this magnitude would not be measurable against the day-to-day fluctuations in transit ridership and would not have a noticeable effect on transit levels of service.



LEGEND:

- BART AND MUNI METRO STATION
- BART ROUTE
- MUNI METRO ROUTE
- BUS ROUTE
- CABLE CAR ROUTE
- 2,30,J,K ROUTE DESIGNATION
- ROUTE DIRECTION
- * BUS STOP (WITHIN ABOUT ONE BLOCK OF SITE)

0 500 FEET

FIGURE 18
235 PINE
MUNI AND BART ROUTES
IN THE PROJECT AREA

SOURCE: MUNI, SAN FRANCISCO STREET & TRANSIT MAP, JUNE 1984

Cumulative development under the Downtown Plan to the year 2000 in conjunction with planned capacity increases of transit carriers would be expected to cause the following changes in transit Levels of Service during the peak period: Muni Northwest Corridor, E to D; BART Transbay, F to E; AC Transit, C to D; Golden Gate Ferry, B to A; Tiburon Ferry, A to B; and Caltrain, B to C.

Project Transit Costs

Muni. The estimated 1981-82 (most recent available) net marginal cost (or increase in the deficit for Muni operations) per additional ride is $0.50./6/ This deficit-per-ride figure, because it is a marginal cost, is appropriate for small increases in Muni ridership (such as those requiring one or a few additional vehicle trips). Assessments of costs that would result from cumulative development require the inclusion of additional cost factors and may be best projected using average costs./7/ It is reasonable to conclude that average costs would be significantly higher than marginal costs.

The project would generate about 55,400 peak-period peak-direction rides per year in the year 2000, which would generate a cost deficit to Muni of about $27,700, assuming that the cost-per-ride deficit remains the same./8/ (This conclusion should be qualified because the Muni deficit-per-passenger-trip figure is based on 1981-82 data, and because the total project-generated deficit is calculated only for those riders who use Muni as their primary mode of transportation, excluding riders who would use a combination of transportation carriers, such as Muni and Caltrain. More recent data that would allow a more precise estimate of costs are not available.) The project would offset this deficit through its contributions to the General Fund, the Transit Impact Development Fee, and sales tax revenues.

On April 27, 1981, the San Francisco Board of Supervisors approved Ordinance 224-81 establishing the Transit Impact Development Fee (TIDF) to support the additional operating costs and capital improvements for Muni transit services associated with new downtown commercial development. The ordinance established a one-time fee of up to $5.00 per gross sq. ft. upon occupancy of new office space within the greater downtown area; the 235 Pine St. project site is located within the fee assessment area. The TIDF ordinance has been in litigation almost since its inception. On January 4, 1985, the San Francisco Superior Court issued a final decision upholding the ordinance. On March 12, 1985, the plaintiffs, a group of downtown property owners, appealed the decision. Money

has been collected pursuant to the ordinance, and is being deposited in an escrow account, pending resolution of the litigation. Under the ordinance, the project would generate about $738,500 in one-time fee revenues to Muni. The fee is intended to recover additional transit costs for the entire economic life of a building, and thus cannot be compared directly to the annual Muni deficit discussed above. The fees collected under the ordinance would, however, reduce the amount of General Fund revenue support necessary for existing and future Muni operations.

The project would also offset Muni's annual operating deficit attributable to the project through its contributions to General Fund revenues, which would be derived from a variety of taxes levied on the proposed project. In the past, a portion of General Fund revenues has been allocated to Muni. The historical level of contribution of General Fund revenues to Muni could change, however, if the TIDF is upheld. Because of the variable relationships of the sources from which Muni receives operating funds, the annual General Fund contribution from the project to Muni cannot be quantified.

General Objective 1, Policy 6 of the Transportation Element states as a goal to "develop a financing system for transportation in which funds may be allocated without unnecessary restriction for priority improvements according to established policies." (p. 10) The project sponsor has agreed to participate in legally adopted funding measures for downtown transit funding, proportional to demand created by the project.

BART. For the fiscal year ending June 30, 1985, the average net operating deficit per passenger trip for BART was about $1.20./9/ On the basis of about 105,000 rides per year in the year 2000, the estimated annual BART deficit attributable to the project would be about $126,000, assuming that the cost per ride deficit is the same./10/ The project would generate a total of about $8,000 in revenues to BART, including about $4,700 in property tax revenues, and about $3,400 from the 75% of the 0.5% transit sales tax allocated to BART. This amount does not include the remaining 25% of the 0.5% BART sales tax revenue distributed by MTC among BART, Muni and AC Transit. After subtraction of BART's revenues from sales and property taxes that would be generated by the project, the net operating deficit of BART due to the project would be about $118,000. BART's operating deficit per passenger is likely to decline in real terms as planned service improvements become operational in the future.

Pedestrian Movements

The pedestrian entrance to the building on Pine St. would provide access to the lobby, where elevators serving upper office floors would be located. Ground-floor retail space would be located past the lobby.

The project at full occupancy would generate about 135 additional pedestrians on sidewalks and crosswalks in the vicinity of the site during the 15-minute peak-period of the noon hour, and about 95 new pedestrians during the p.m. peak 15-minute period. Pedestrian travel destinations were estimated on the basis of projected major travel modes. Pedestrian trips were assigned to sidewalks and crosswalks on the basis of these destinations.

Operating conditions on sidewalks and crosswalks have been evaluated in terms of pedestrian flow categories or regimen, which relate the density of pedestrians in a specific time period (pedestrians per foot of clear sidewalk width per minute) to the quality of pedestrian flow (the difficulty of maintaining walking paths and speeds on a sidewalk)./11/ Appendix C, Table C-2, p. A-41 shows the relationships among flow rates, walking speed, path choice, and interaction among pedestrians for each flow regime. Appendix C, Figure C-2, pp. A-42, shows photographs of sidewalk conditions for each flow regime. Typically, an upper limit for desirable conditions is 14 pedestrians per foot per minute (p/f/m), defined as crowded, although conditions as high as 18 p/f/m, a congested condition in which pedestrians are subjected to extreme crowding, have been documented./11/

Table 5, p. 78, summarizes pedestrian flow conditions on sidewalks and crosswalks adjacent to the site at the intersections of Pine and Battery Sts. and Pine and Sansome Sts. The sidewalks and crosswalks adjacent to the project site currently operate in unimpeded and impeded conditions during both the noon-peak 15-minute period and the p.m.-peak 15-minute period./12/ Conditions on the sidewalks and crosswalks adjacent to the project following addition of the project pedestrian travel to the existing (1984) volumes would be the same as at present except for the Pine St. sidewalk during the noon 15-minute peak and the crosswalks across Battery St. at Pine and across Sansome at Pine St. in the p.m. peak 15-minute period. Conditions at these would worsen from unimpeded to impeded.

TABLE 5: PEAK PEDESTRIAN VOLUMES AND FLOW REGIMEN (Project Side of Street)

	Total Width (Feet)	Effective Width (Feet) /a/	Existing		Existing Plus Project		2000		Project Percent
			p/f/m/b/	Flow Regimen/c/	p/f/m	Flow Regimen	p/f/m	Flow Regimen	
Noon Peak /d/									
Pine Street sidewalk	14.5	10.0	1.4	Unimpeded	2.3	Impeded	3.1	Impeded	29%
Crosswalk across Pine Street at Battery Street	10.5	10.5	2.2	Impeded	2.7	Impeded	3.5	Impeded	12%
Crosswalk across Battery Street at Pine Street	12.5	12.5	2.2	Impeded	2.6	Impeded	3.4	Impeded	11%
Crosswalk across Pine Street at Battery Street	9.0	9.0	2.3	Impeded	2.8	Impeded	3.7	Impeded	14%
Crosswalk across Sansome Street at Pine Street	12.0	12.0	2.4	Impeded	2.7	Impeded	3.6	Impeded	11%
P.M. PEAK /d/									
Pine Street sidewalk	14.5	10.0	0.81	Unimpeded	1.4	Unimpeded	1.9	Unimpeded	34%
Crosswalk across Pine Street at Battery Street	10.5	10.5	2.6	Impeded	2.9	Impeded	3.8	Impeded	8%
Crosswalk across Battery Street at Pine Street	12.5	12.5	2.0	Unimpeded	2.2	Impeded	2.9	Impeded	9%
Crosswalk across Pine Street at Sansome Street	9.0	9.0	2.6	Impeded	3.0	Impeded	3.9	Impeded	9%
Crosswalk across Sansome Street at Pine Street	12.0	12.0	2.0	Unimpeded	2.2	Impeded	2.9	Impeded	9%

/a/ The effective width is the narrowest portion of the sidewalk and is calculated by subtracting the space taken by poles, planter boxes, people standing at windows etc., from the total width.
/b/ Pedestrians per foot of effective sidewalk width per minute.
/c/ See Table C-2 and Figure C-2, Appendix C, for descriptions of pedestrian flow regimens.
/d/ Peak 15-minute periods.

SOURCE: Environmental Science Associates, Inc.

The project would have a 15-ft. curb-cut for the project garage and loading access. A 30-ft. curb-cut currently serves the existing garage. The project would improve pedestrian safety slightly, as vehicle-pedestrian conflicts at the site would be reduced as a result of the proposed project garage being about half the size of the existing garage.

Sidewalks and crosswalks adjacent to the project would operate in the year 2000 in the impeded range during the noon peak. The project pedestrian traffic would represent about 29% of the pedestrian volumes on the Pine St. sidewalk, and between 11% and 14% of the pedestrian volumes on the crosswalks adjacent to the project block.

P.M. peak-hour operations in the year 2000 would be in the impeded range, with the exception of the Pine St. sidewalk during the p.m. peak 15-minute period. The Pine St. sidewalk would operate in unimpeded conditions. Project pedestrian traffic during the p.m. peak hour would represent about 34% of the pedestrian volumes on the Pine St. sidewalks, and between eight percent andd nine percent of the p.m. peak-hour crosswalk pedestrian volumes would be from the project.

Although as noted above, for some cases conditions would be in the impeded range, there would continue to be adequate facilities for pedestrians on the sidewalks and crosswalks in the study area.

As part of the project, the sponsor would contribute to the development of Commercial St. (between Sansome and Montgomery Sts.) to be improved to be a part-time pedestrian street as called for in the Downtown Plan.

Local Intersection Traffic

The project would provide about 60 valet parking spaces in four parking levels, with access from Pine St. A net total of 157 spaces would be eliminated (there are currently 217 spaces on the site). Project-related parking, loading and service vehicle traffic would result in increases in traffic at intersections in the downtown, including intersections in the immediate project vicinity. As the project would result in a net reduction of on-site parking spaces, the overall number of cars going through the intersections of Pine and Battery, and Pine and Sansome, would probably be reduced. Vehicles currently using the existing facility, and new vehicular traffic generated by the project that would not be

accommodated by project parking, would be expected to use other parking in the downtown area; this traffic would be dispersed to intersections throughout the area.

With the existing one-way westbound operation of Pine St., all inbound traffic (to the project site) would continue to approach the project from Battery and Pine Sts. The garage entrance/exit would be two lanes wide and controlled by an attendant. The entry lane and second floor service level would have room to store about 20 vehicles awaiting service during the a.m. peak hour (assumed to be the peak arrival period); this storage space would be sufficient to prevent queued vehicles from extending across the sidewalk or on to Pine St. and interfering with traffic flow. Outbound traffic (from the project garage) would exit on to Pine St. and Sansome Sts. as under current conditions.

Freeway On-Ramp Analysis

Traffic operations for two intersections serving freeway on-ramps near the project site are shown in Table 6, below). The project would incrementally contribute to traffic at freeway on-ramps during the p.m. peak hour. The intersection of Mission and Beale Sts. currently operates in Level of Service E conditions. The intersection of Clay and Battery Sts. currently has Level of Service C conditions during the p.m. peak hour. Operation at Level of Service C represents acceptable conditions, while operation at Level of Service E represents unacceptable delay to motorists.

TABLE 6: PROJECTED PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY RATIOS (V/C) AND LEVELS OF SERVICE (LOS)/a/

	1984		1984 + Project		Downtown Plan (2000)	
Intersection	V/C	LOS	V/C	LOS	V/C	LOS
Beale & Mission Sts.	0.92	E	0.92	E	1.05	F
Clay & Battery Sts.	0.74	C	0.74	C	0.81	D

/a/ Level of Service descriptions and relationship to V/C ratios are shown in Table C-3, p. A-45 of Appendix C.

SOURCE: Environmental Science Associates, Inc.

Project traffic alone would not change the LOS at any freeway on-ramps. Level of Service descriptions are shown in Table C-3, Appendix C, p. A-45. For the year 2000 projections, 1984 traffic volumes were increased by a 19% average growth factor based on the Downtown Plan EIR traffic analysis. The growth factor represents a worst-case, unrestrained auto demand condition for street traffic in the downtown and, as such, is probably higher than actual traffic growth may be in the future in the downtown. Motorists confronted with increased delays on surface streets would be expected to alter their travel patterns to use less congested routes (to the freeway ramps) or to travel at different times (to avoid periods of traffic congestion). The intersections of Mission and Beale Sts. and Clay and Battery Sts. are at Level of Service E and C, respectively, during the p.m. peak hour. Peak-hour conditions would be expected to deteriorate at both of the intersections by the year 2000 as shown in Table 6. Expanded areas of traffic congestion would disrupt surface Muni operations.

Muni operations would be adversely affected by increased congestion. Operation of Muni surface transit routes through the congested areas would be impeded; this would lead to decreased levels of Muni service since scheduled headways would not be met.

Freeway Corridor Analysis

The project would contribute to increases in traffic on the major freeways serving downtown San Francisco. Both the East Bay and Peninsula corridors would have excess peak-hour demand that would not be met during the peak period. The North Bay corridor would have excess demand in the peak period. Excess auto demand would result in either a spreading of the demand into the hours adjacent to the peak period or in increased transit and ridesharing use should additional transit service (beyond that assumed to occur by the year 2000) or ridesharing incentives be provided.

Traffic generated by the project would increase total traffic on major freeways during the p.m. peak period and the p.m. peak hour by about 0.1%. Such increases would not be measurable against the day-to-day fluctuations in traffic volumes. Because the Bay Bridge p.m.-peak-hour eastbound traffic flow is functionally at capacity, the travel demand from the project would not be expected to increase the flows on the Bay Bridge in the peak hour; rather the East-Bay-bound auto traffic from the project would most likely compete with and possibly displace existing users of the Bay Bridge into later portions of

the peak period. This competition for access would occur at the on-ramps to the Bay Bridge and any displacement of existing users to later time periods would depend on the time of arrival of project vehicles at the on-ramps. Some drivers would shift to carpools or transit as a result of cumulative displacement.

OFF-STREET PARKING AND LOADING REQUIREMENTS AND DEMAND

Parking

The project would create net new long-term parking demand for about 115 spaces and net new demand for about eight short-term spaces for a total demand of about 123 equivalent daily spaces. The project would provide 60 valet parking spaces (all short-term) and eliminate 217 spaces, resulting in an unmet demand of about 280 spaces (123 + 217 = 340 - 60 = 280 spaces).

The estimated parking demand (both long-term and short-term) from the C-3 District in 1984 was found to be about 45,300 spaces, which would occupy about 94% of the 48,000 parking spaces in and near the C-3 District. The short-term parking demand, while representing about 25% of the equivalent daily demand, is about 65% of the daily vehicle travel. Although the equivalent daily demand would leave about 10% of the parking supply vacant, surges in short-term demand (more travel in one period than in another period) can cause temporary localized overloads of parking facilities within various portions of the downtown, even though parking may be available elsewhere in the downtown.

The Downtown Plan discourages "new long-term spaces in and around the downtown" (p. 126 of the Downtown Plan). The project would eliminate 217 parking spaces (some of which are long-term), replacing them with 60 short-term spaces; the project would thus respond to this policy.

The C-3 District would generate demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent about 0.2% of the total demand from the C-3 District. As noted in the Downtown Plan EIR, the parking supply in the year 2000 has been assumed to increase to about 51,000 spaces. There would be a parking deficit of

about 6,000 spaces in that year if vehicular demand occurs as projected. However, the analysis in the Downtown Plan EIR for the year 2000 forecasts excess auto demand in the peak hour and the peak period. If the excess demand is accommodated on transit or ridesharing, then the overall parking demand would decrease from the above estimate by about 2,300 spaces.

If the goals of the Downtown Plan are met, total parking demand in the year 2000 would be about 48,100 equivalent daily spaces, an increase of 6% over 1984. If the goals were achieved, there would not be a parking deficit.

As required by the City Planning Code, four spaces in the parking garage would be for handicapped parking. Additionally, all remaining parking spaces would be subject to rates that encourage short-term use and discourage all-day parking; the parking rate schedule would be reviewed and approved by the Department of City Planning, or alternatively, the project sponsor would agree to be bound by a formula, to be developed by the Department of City Planning, which structures rates to favor short-term parking. The project sponsor would also be required to provide five bicycle storage spaces in the parking garage.

Loading

Table 7 shows total service vehicle travel and average hourly service-vehicle demand for the project, based upon data published in Center City Circulation Program: Pedestrian Circulation and Goods Movement./13/ The new building would generate about 32 service vehicle stops per day. Average hourly loading space needs are given in terms of spaces per hour per 10,000 gross square feet of building space; average demand for the project would be about 1.4 space per hour and peak hourly demand would be for about 1.8 spaces.

Under the City Planning Code, the project would be required to provide one loading dock to serve the 147,700 gross sq. ft. of office space. The retail use in the project is not of sufficient size to require additional loading facilities. One loading space would be located on the service level (as required by the Downtown Plan, the loading space would be 25 ft. long, and 10 ft. wide with 12 ft. 6 in. clear above), accessible from a 15-ft. curb cut on Pine St. The loading area would connect with the elevator banks to the office floors. Building directories and signs for the service elevators would be placed in the loading area.

TABLE 7: PROJECTED SERVICE-VEHICLE TRAVEL ATTRIBUTABLE TO THE PROJECT/a/

Use	Space (GSF)/b/	Daily Stops/ 10,000 sq. ft. of GSF/b/	Daily Stops	Spaces/Hour/ 10,000 sq. ft. of GSF/b/	Average Spaces/ Hour
Office	147,700	2.1	31	0.1	1.5
Retail	2,500	3.0	1	0.2	(less than 0.1)
TOTALS			32		1.5

/a/ Service-vehicle travel has been included in total travel calculated for the project.
/b/ Gross square feet of floor space.

SOURCES: Environmental Science Associates, Inc.; Department of City Planning, 1980, Center City Circulation Program.

Truck access to the project would not require any backing movements from or on to Pine St. The potential for pedestrian-vehicle conflicts would be reduced by the project by reducing the curb cut from 30 ft. to 15 ft. and by reducing the amount of traffic to the site by reducing on-site parking.

NOTES - Transportation

/1/ Construction data are contained in a memorandum from Charles Graham, Vice-President, London and Edinburgh Trust (received November 1984), on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister, Sixth Floor.

/2/ San Francisco Department of City Planning, Transportation Guidelines for Environmental Impact Review: Transportation Impacts, September 1983. This document describes the procedure used to calculate travel demand from the project. Daily trip generation rates of 18.1 person trip-ends (pte) per 1,000 gross sq. ft. of office space and 150 pte per 1,000 gross sq. ft. of retail space were used to generate travel from the project. The two trip generation rates are for independent land uses. When used to generate travel from more than one land use on the same site the rates may overestimate total travel to the site since a portion of the travel from each of the land uses may occur between land uses on the site and not leave the site. Such trips are referred to as "linked trips." The calculations for this project have not been discounted to account for linked trips and thus present a "worst-case" scenario. The September 1983 Transportation Guidelines are on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, 6th Floor.

/3/ The percentages of travel occurring in the peak period and the peak hour are from the Transportation Guidelines. Total travel during each of the periods has been adjusted to show only outbound (leaving the downtown area in the peak commute direction) travel. The outbound travel consists of all of the work-related travel and half of the other (non-work) travel.

/4/ San Francisco Department of City Planning, Downtown Plan Environmental Impact Report (EIR), EE81.3, certified October 18, 1984. This document is an analysis of projected growth in the C-3 District to the year 2000 under the Downtown Plan and five alternatives. The transportation analysis in the EIR includes projections of future modal splits for work and other (non-work) travel for the p.m. peak period, peak hour, and daily time periods. This document is on file with and available for public review at the Department of City Planning, 450 McAllister Street.

/5/ San Francisco Department of City Planning, January 1983, Transportation, an Element of the Master Plan.

/6/ This deficit-per-ride figure is based upon information provided in: Touche Ross & Co., Transit Impact Development Fee Cost Study, Fiscal Year 1981-82, July 1983, Corrected September 9, 1983, and consultation with Bruce Bernhard, Chief Financial Analyst, San Francisco Municipal Railway, telephone conversations, October 11, 1984, and March 20 and May 13, 1985. The calculation of the peak-period marginal deficit (additional cost per ride minus additional revenue per ride) was done by ESA.

/7/ According to Muni, the appropriate technique for determining the costs to Muni of cumulative development is an average cost analysis which would include both capital and operating costs. Application of this technique, however, is limited because relevant capital cost data are not available from Muni. Further, capital costs are difficult to allocate on a person-trip basis, as capital expenditures occur from time to time in large amounts, not necessarily annually. The established method of allocating capital costs is through depreciation, which is based on historical depreciation costs, not replacement costs. Such an estimate would be low in comparison with the costs of new capital improvements required for a single passenger trip. The use of existing capital cost data would underestimate future capital cost needs. Existing Muni accounting statistics do not enable future capital costs to be calculated on a per-passenger-trip basis (Bruce Bernhard, Muni Chief Financial Analyst, telephone conversation, March 25, 1985).

/8/ The deficit due to the project would be: 220 peak-period trips per day x 252 working days per year x $0.50 deficit = $27,720. The cost deficit estimate is based on the assumption that essentially all vehicles are operating at capacity during peak periods and additional riders would require new vehicle trips. It was assumed that during off-peak periods, all vehicles operate with excess capacity, resulting in an average off-peak marginal cost of zero. These cost estimates are appropriate for project costs to Muni of a single office building. Assessments of costs that would result from cumulative development require the inclusion of additional cost factors and may be best projected using average cost data. Muni does not have data that would enable it to estimate the average cost per passenger trip. It is reasonable to conclude that average costs would be significantly higher than marginal costs.

/9/ Ward Belding, Supervisor, Office of Research, BART, telephone conversations, September 27, 1985. The $1.20 average deficit per trip is based on all operating costs and

revenues for the entire system and is not specific to San Francisco trips. Available data from BART do not enable peak and non-peak period costs to be differentiated.

/10/ 416 BART trips per day x 252 days/year x $1.20 = $125,800.

/11/ Pushkarev and Zupan, 1975, Urban Space for Pedestrians, MIT Press, Cambridge, Mass., pp. 85-117.

/12/ Pedestrian counts were made by Environmental Science Associates, Inc. on November 5 (Tuesday) and 19 (Tuesday), 1984 from 12 p.m. to 1 p.m. and from 4:30 p.m. to 5:30 p.m.

/13/ San Francisco Department of City Planning, 1980, Center City Circulation and Goods Movement, Working Papers 1, 2 and 3, and Final Report.

F. AIR QUALITY

The analysis below includes a brief summary (summaries) of the material in the Downtown Plan EIR. This summarized material is incorporated by reference as follows:

VOLUME 1: FINAL EIR TEXT.

I. SUMMARY (pp. I.I.1-I.I.3I). I. Air Quality; Short-term Construction Impacts, Long-Term Operation Impacts: Pollutant Emissions, Ozone Concentrations, Carbon Monoxide Concentrations, Total Suspended Particulate Concentrations, Nitrogen Dioxide Concentrations, Sulfur Dioxide Concentrations

IV. ENVIRONMENTAL SETTING AND IMPACTS OF THE DOWNTOWN PLAN. I. Air Quality; Setting (pp. IV.I.1-IV.I.9): Introduction, Existing Regional and Local Air Quality: Ozone, Carbon Monoxide, Total Suspended Particulate, Nitrogen Oxides, Sulphur Dioxide; Air Quality Planning and Forecasting: Ozone Modeling for the 1982 Bay Area Air Quality Plan, Carbon Monoxide for the 1982 Bay Area Air Quality Plan, Carbon Monoxide Modeling for Downtown San Francisco, Other Pollutants. Impacts (pp. IV.I.9-IV.I.19): Short-term Construction Impacts; Long-Term Operation Impacts - Compatibility with Air Quality Plans, Pollutant Emissions; Ozone Concentrations - 1990, 2000; Carbon Monoxide Concentrations - 1990, 2000; Total Suspended Particulate Concentrations - 1990, 2000; Nitrogen Dioxide Concentrations - 1990, 2000; Sulphur Dioxide Concentrations - 1990, 2000

V. MITIGATION OF ENVIRONMENTAL IMPACTS (pp. V.I.1-V.I.2). Annual Limits on New Commercial Development in the City; Measures Identified by this Report

VOLUME 2: APPENDICES (pp. O.1-O.9). Calculations of Air Pollutant Emissions and Carbon Monoxide Concentrations

VOLUME 3: SUMMARY OF COMMENTS AND RESPONSES (pp. C&R I.1-11). Part 1: Responses

Upon completion, the project would affect air quality in two ways. Emissions would be generated by project-related traffic, and by combustion of natural gas for building space and water heating. Transportation sources would account for over 95% of project-related emissions.

Curbside CO concentrations at selected intersections that would be affected by project-generated traffic and by cumulative development traffic were projected for conservative conditions, and are compared with ambient standards in Table 8, below. These projections were calculated using a revised version of the Modified Linear Rollback (MLR) method which was developed for the Downtown Plan EIR. In 2000 the average vehicle is expected to emit 43% less carbon monoxide (CO) than in 1984 due to ongoing state and federal emissions controls.

Currently, the eight-hour CO standard is estimated to be violated at the Beale and Mission and Battery and Clay intersections. CO concentrations are predicted to be less in 2000 than in 1984 and would not violate the standards at this intersection in this future scenario.

TABLE 8: EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm)/a/	
		1984	Downtown Plan 2000/b/
Beale & Mission	1-hour	13.4	9.3
	8-hour	9.8	7.0
Battery & Clay	1-hour	13.0	9.2
	8-hour	10.3	7.1

/a/ Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the Downtown Plan EIR. Background concentrations were calculated to be 7.4 ppm for one hour and 5.7 ppm for eight hours in 1984, and 5.7 ppm for one hour and 4.1 ppm for eight hours in 2000. Underlined values are in violation of the state or federal CO standards. The one-hour state standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight hour state and federal standards are 9 ppm.
/b/ Based on the growth forecast methodology contained in the Downtown Plan EIR, Vol 3, Table IV.1.3, p. C&R-I.8. The project would be contained within this forecast.

SOURCE: Environmental Science Associates, Inc.

The California Legislature has mandated a biennial inspection and maintenance (I/M) program which applies to most cars and light trucks in California. This program went into operation in March 1984. Vehicles covered by the legislation must undergo a check consisting of a visual inspection of the vehicle's emission control system, measurement of tailpipe emissions while the vehicle is idling and comparison of the measured emission rates to the allowable limits for the appropriate year of manufacture and model of vehicle. Vehicles must have the required emission control equipment and must meet the specified standards for hydrocarbons and carbon monoxide. If required emission control equipment is not present it must be installed. If all required equipment is in place but the vehicle's emissions exceed the standards, the owner must pay a maximum of $50 for service intended to result in compliance.

An annual I/M program was evaluated in the 1982 Bay Area Air Quality Plan based on the 1979 source inventory. Based on predicted reduction in hydrocarbons and CO of 25% in vehicles covered, a reduction in total motor vehicle-generated CO of about 18% would be expected. The reduction in total regional CO emissions would be about 16%. The reduction in motor vehicle-generated hydrocarbons would be 17%; the reduction in total regional hydrocarbon emissions would be about six percent.

As CO concentrations in downtown San Francisco are almost entirely due to motor vehicles, future CO levels are predicted to be lower than they would be without an I/M program. Thus, actual concentrations are expected to be lower than CO concentrations shown in Table 8 and CO and HC emissions shown in Table 9, because the Downtown Plan EIR did not take the I/M program into account.

Table 9 shows projected daily emissions of pollutants in 2000 from project-generated traffic, projected daily emissions in 2000 for C-3 District development projected by the Downtown Plan EIR, and total emissions projected for the entire Bay Area by the 1982 Bay Area Air Quality Plan. The project would contribute about one percent to the total emissions generated by Downtown Plan development, in 2000.

Emissions of total suspended particulates (TSP) resulting from construction and from vehicle trips generated by the project and cumulative development would increase TSP

TABLE 9: PROJECTED DAILY POLLUTANT EMISSIONS

Pollutant	Emissions (tons per day) /a/ Project 2000/b/	Downtown Plan 2000/c/	Bay Area 2000/d/
Hydrocarbons	0.006	0.6	428
Nitrogen Oxides	0.007	0.8	610
Carbon Monoxide	0.071	6.6	1,883
Particulates	0.010	1.3	649
Sulfur Oxides	0.001	0.1	233

/a/ Project and Downtown Plan emissions calculated using BAAQMD vehicle emission factors. Emissions of HC, NOx, and CO include an assumed six minutes of idling time per vehicle trip. Emissions of TSP include dust disturbed from roadway surfaces.
/b/ Based upon a weighted daily average of 12.8 miles traveled.
/c/ Incremental emissions of C-3 District development, per The Downtown Plan EIR, Vol 1, Table IV.1.2, p. IV.I.12.
/d/ Cumulative total emissions of Bay Area development, per ABAG, BAAQMD, MTC, 1982 Bay Area Air Quality Plan, pp. 42, 53 and 112.

SOURCE: Environmental Science Associates, Inc.

concentrations, which could increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility./1/

The 1982 Bay Area Air Quality Plan contains strategies which consist primarily of HC and CO emission controls on stationary sources and motor vehicles, and transportation improvements, and are aimed at attaining the federal ozone and CO standards. Emissions associated with the project and with cumulative downtown development under the Downtown Plan are not projected by this EIR or the Downtown Plan EIR to increase ozone concentrations, and thus would not conflict with the objectives of the 1982 Bay Area Air Quality Plan regarding ozone. Cumulative downtown development is projected by the Downtown Plan EIR potentially to result in a violation of the eight hour CO standard at the Brannan/Sixth intersection as analyzed therein. The model used to make the CO projections may not be accurate to within the percentages of the violations. This winter, the City monitored CO and counted traffic at the Brannan/Sixth intersection. Once these data are analyzed, it should be possible to validate and recalibrate, if necessary, the model projections. Until then, a determination of whether cumulative downtown development would conflict with objectives of the 1982 Bay Area Air Quality Plan regarding CO cannot be made.

NOTE - Air Quality

/1/ State particulate standards were changed in 1983 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled. Until the State adopts a method for monitoring fine particulate matter, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards, whether new standards would be violated, or what the health implications would be.

G. GROWTH INDUCEMENT

The project would include about 147,700 gross sq. ft. of office space and about 2,500 sq. ft. of retail (including some child care) space (all of which would be a net increase on the site). Employment at the site would increase to about 600 people, from six. Occupants of the proposed project are not known, but could include tenants expanding or relocating from other San Francisco locations, tenants relocating from outside San Francisco, and firms new to the Bay Area. The increase in employment at the project site, therefore, would not necessarily represent employment that is new to San Francisco. If the project were fully leased, however, and the office space of the project did not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco could increase by about 600 jobs due to the project. Additional jobs also would be supported indirectly in San Francisco through the multiplier effect.

If marketed succesfully, the project, together with other planned office development, could have growth-inducing effects by demonstrating a market for office space in this area. This could thereby encourage similar development on lots (including smaller lots assembled for development) currently occupied by low-rise or mid-rise buildings containing support services. The demand for office space reflects the trend of growth in service sector and headquarters office activities and employment in San Francisco. Increases in downtown office space and employment would contribute to continued growth of local and regional markets for housing, goods, and services. These growth-inducing effects would be less extensive if the vacancy rate for office space rises. Should this occur, projected increases in downtown employment would be less and the growth in demand for goods, services and housing would lower.

It is expected that some downtown workers, including some in the project, would want to live in San Francisco. Employment growth, however, would not be reflected directly in increases in demand for housing and city services to residents, as some new jobs would be held by individuals who already live and work in the City; who live in the City but previously either did not work, or worked outside the City; who live in surrounding communities; or who are unable to afford or locate housing in the City. New downtown workers would also increase demand for housing in other parts of the Bay Area.

Any net increase in employment downtown would increase the demand for retail goods and services in the area. The project would intensify this demand by increasing the amount of employment on the site and by displacing more services than it would replace.

Increases in employment downtown would also increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services. In response, demand would increase for existing space and possibly for further new development.

The project would be built in a developed urban area, and no expansion to the municipal infrastructure not already under consideration would be required to accommodate new development and increased employment due to, or induced by, the project.

V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE POTENTIAL ADVERSE IMPACTS OF THE PROJECT

In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the proposed project. Some of these measures have been, or would be, adopted by the project sponsor or project architects and contractors and thus are proposed; some are under consideration; and some have been rejected. Implementation of some may be the responsibility of public agencies. Measures under consideration or measures rejected by the sponsor may be required by the City Planning Commission as conditions of project approval.

Each mitigation measure and its status are discussed below. Where a measure has not been included in the project, the reasons for this are discussed.

Mitigation measures below preceded by an asterisk (*) are from the Initial Study (see Appendix A, p. A-2).

VISUAL QUALITY

MEASURE PROPOSED AS PART OF THE PROJECT

*- In order to reduce obtrusive light or glare, the project sponsor would use no mirrored glass on the building.

CULTURAL RESOURCES

MEASURES PROPOSED AS PART OF THE PROJECT

- The sponsor would retain the services of an archaeologist. The Environmental Review Office (ERO), in consultation with the President of the Landmarks Preservation Advisory Board (LPAB) and the archaeologist, would determine whether the archaeologist should instruct all excavation and foundation crews on the project

site of the potential for discovery of cultural and historic artifacts, and the procedures to be followed if such artifacts are uncovered.

Given the strong possibility of encountering the remains of cultural or historic artifacts within the project site, prior to the commencement of foundation excavations the project sponsor would undertake a program of archaeological testing. This would consist of observation and monitoring by a qualified historical archaeologist of site clearance of at least any materials below existing grade level, and either the placement of a series of mechanical, exploratory borings or other similar on-site testing methods. The archaeologist would supervise the testing at the site to determine the probability of finding cultural and historical remains. At the completion of the archaeological testing program, the archaeologist would submit a written report to the ERO, with a copy to the project sponsor, which describes the findings, assesses their significance and proposes appropriate recommendations for any additional procedures necessary for the mitigation of adverse impacts to cultural resources determined to be significant.

An historical archaeologist would be present during site excavation and would record observations in a permanent log. The ERO would also require cooperation of the project sponsor in assisting such further investigations on site as may be appropriate prior to or during project excavation, even if this results in a delay in excavation activities.

In addition, a program of on-site construction monitoring by a qualified historical archaeologist, designed to allow for the recovery of a representative sample of the cultural materials existing on the site, would be implemented by the project sponsor. This monitoring and recovery program would result in a written report to be submitted to the ERO, with a copy to the project sponsor.

Should cultural or historic artifacts be found following commencement of excavation activities, the archaeologist would assess the significance of the find, and immediately report to the ERO and the President of the LPAB. Upon receiving the advice of the consultants and the LPAB, the ERO would recommend specific mitigation measures, if necessary. Excavation or construction activities following the preconstruction archaeological testing program which might damage the

discovered cultural resources would be suspended for a maximum of four weeks (cumulatively for all instances that the ERO has required a delay in excavation or construction) to permit inspection, recommendation and retrieval, if appropriate.

- Following site clearance, an appropriate security program would be implemented to prevent looting. Any discovered cultural artifacts assessed as significant by the archaeologist upon concurrence by the ERO and the President of the LPAB would be placed in a repository designated for such materials. Copies of the reports prepared according to these mitigation measures would be sent to the California Archaeological Site Survey Office at Sonoma State University.

TRANSPORTATION

MEASURES PROPOSED AS PART OF THE PROJECT

- The project sponsor shall: 1) participate with other project sponsors and/or the San Francisco Parking authority in undertaking studies of the feasibility of constructing an intercept commuter parking facility in a location appropriate for such facility to meet the unmet demand for parking for those trips generated by the project which cannot reasonably be made by transit, and 2) participate with other project sponsors and/or the Municipal Railway in studies of the feasibility of the establishment of a shuttle system serving the project site and the parking facility.

- During the construction period, construction truck movement would be permitted only between 9:00 a.m. and 3:30 p.m., to minimize peak-hour traffic conflicts and to accommodate queueing to Muni buses prior to the peak hours. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering of the Department of Public Works, the Fire Department, Muni and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. To minimize cumulative traffic impacts due to lane closures during construction, the project sponsor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction or later become known.

- Within a year of full occupancy of the project, the sponsor would conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for carpools and vanpools. The project sponsor would make this survey available to the Department. This measure would provide needed information to aid in transportation planning within the City.

- As required by Section 163 of the City Planning Code, a member of the building management staff would be designated as a transportation broker to coordinate measures that are part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak-period congestion by a planned spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, Muni, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for carpool and vanpool information.

- The project sponsor would, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for Muni trolley wires on the proposed building wherever necessary or agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense.

- The project sponsor would contribute funds for maintaining and augmenting transportation services in an amount proportionate to the demand created by the project, as provided by the Board of Supervisors Ordinance Number 224-81. Should said Ordinance be declared invalid by the courts, the project sponsor has agreed to participate in any subsequent equivalent mitigation measures adopted by the Planning Commission or the City in-lieu thereof, which would apply to all projects similarly situated.

- Building directories and signs for the service elevators would be placed in the loading area.

- The placement of paving, landscaping or structures in the sidewalk area (subject to City approval) would be done in such a way as to minimize interference with pedestrian traffic.

- The project would include on-site storage for trash containers in the basement. Containers would not be placed on streets or sidewalks except during actual trash pickup.

- Off-street parking spaces would be controlled to assure priority for vehicles driven by the physically handicapped, vehicles using spaces for short-term rather than all-day parking, and vanpool and carpool vehicles. All remaining parking spaces would be subject to rates that encourage short-term use of said spaces and discourage all-day parking; the parking rate would be reviewed and approved by the Department of City Planning, or alternatively, the project sponsor would agree to be bound by a formula, to be developed by the Department of City Planning, which structures rates so as to favor short-term parking.

MEASURES UNDER CONSIDERATION BY PROJECT SPONSOR

- The parking driveway could include warning devices (lighted signs and noise-emitting devices) to alert pedestrians to vehicles exiting the structure. The sponsor will make a decision on this measure during final design stage based on design criteria and cost.

- The project could provide containers to collect and store recyclable solid waste (such as glass, metal, computer cards, and newspaper) and the project sponsor could contract for recycling service. The project sponsor will make a decision about this measure during final building design based on cost effectiveness.

MEASURES REJECTED BY THE PROJECT SPONSOR

- During the construction period, construction truck movements could be permitted only between 9:00 a.m. and 3:00 p.m., to minimize peak-hour traffic conflicts and to accommodate queueing of Muni buses prior to peak hours. The project sponsor believes that limiting truck movements to between 9:00 a.m. and 3:30 p.m., as

proposed as part of the project, would be adequate to alleviate peak-hour traffic conflicts and accommodate queueing of Muni buses prior to peak hours. To limit construction truck traffic to between 9:00 a.m. and 3:00 p.m. would lengthen the total construction period.

MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES

- Pacific Gas and Electric Company could coordinate work schedules with other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This should be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). In-street utilities could be installed at the same time as the street is opened for construction of the project to minimize street disruption.

- The City could implement the transportation improvements described in the Downtown Plan. Cumulative transportation impacts within San Francisco would be reduced by the improvements, and, to the extent that San Francisco could influence transportation improvements recommended by the Plan for areas outside the City, regional cumulative impacts caused by downtown growth would also be reduced.

- The City could act to implement the transportation mitigations described in Vol. 1, Section V.E., Mitigation, pp. V.E.4-28, in the Downtown Plan EIR. These measures are similar or identical to those in the Downtown Plan and include, in summary: measures to construct and maintain rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in San Francisco; measures to fund Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand existing non-rail transit service; provide exclusive transit lanes on City streets and on freeways; reduce incentives to drive by reducing automobile capacities of bridges and highways in certain circumstances and by discouraging long-term parking; measures to encourage carpools, vanpools, and bicycle use; and measures to improve pedestrian circulation within downtown San Francisco. Some of the Implementing Actions would require approval by decision-makers outside the City and County of San Francisco; many of the measures

would require action by City agencies other than the City Planning Commission, such as the San Francisco Public Utilities Commission and/or Board of Supervisors. These measures are system-wide measures that must be implemented by public agencies. Other than project-specific measures such as the relevant transportation mitigation measures described above as part of the project or such as the Transit Impact Development Fee assessment required by San Francisco ordinance 224-81 which contribute indirectly to implementation of these system-wide measures, it is not appropriate to impose mitigation at system-wide levels on individual projects.

AIR QUALITY

MEASURES PROPOSED AS PART OF THE PROJECT

*- The project sponsor would require the general contractor to sprinkle demolition sites with water continually during demolition activity; sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50%; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soil, sand, or other such material; and sweep streets surrounding demolition and construction sites at least once a day to reduce TSP emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants, by such means as a prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of a contruction period.

- Measures identified to mitigate traffic impacts would also mitigate air quality impacts. Increasing roadway capacity (where feasible and cost effective), reducing vehicular traffic through increased ridesharing (carpool, vanpool, and transit), and implementing flexible and/or staggered work hours would reduce local and regional emissions of all pollutants.

NOISE

MEASURES PROPOSED AS PART OF THE PROJECT

*- The project sponsor would require the project contractor to muffle and shield intakes and exhaust, shroud or shield impact tools, and use electric-powered rather than diesel-powered, construction equipment, as feasible, so that noise would not exceed limits stated in the City's Noise Ordinance (Article 29, San Francisco Administrative Code, 1972).

*- The project sponsor would require the general contractor to construct barriers around the site and stationary equipment such as compressors, which would reduce construction noise by as much as five dBA and to locate stationary equipment in pit areas or excavated areas as these areas would serve as noise barriers.

*- The project sponsor would require that the construction contractor predrill holes for piles, in order to minimize noise and vibration from pile driving. The actual pounding from pile driving would occur during a five- to eight-minute span per pile. The project sponsor has agreed to limit pile driving to the hours resulting in the least disturbance to the greatest number of neighboring uses. For nighttime pile driving, this would require a work permit from the Director of Public Works, pursuant to San Francisco Noise Ordinance Section 2907(c). The project sponsor would schedule pile driving so as to disturb the fewest people.

*- As recommended by the Environmental Protection Element of the San Francisco Master Plan, an analysis of noise measurements would be prepared by the project sponsor and recommended noise insulation features would be included as part of the proposed building. For example, such design features could include fixed windows and climate control.

ENERGY

MEASURES PROPOSED AS PART OF THE PROJECT

*- The project would be more energy efficient than required by State Administrative Code Title 24. To conserve electric energy, the project would include multiple

light-switching; a variable-air-volume air conditioning system; and an outside-air/return-air economizer cycle. A carbon monoxide monitoring system would control garage ventilation, to avoid unnecessary operation of fans.

*- Natural gas would be used for space heating.

MEASURE UNDER CONSIDERATION BY PROJECT SPONSOR

- Final decisions on project energy saving mitigation measures that would make the project more efficient than required by Title 24 would be made on the basis of life-cycle costing and compatibility with the overall design; a separate report would be prepared for the Department of City Planning prior to the application for the building permit which would explain the decisions regarding which energy conservation features would be included in the final design.

GEOLOGY/TOPOGRAPHY

MEASURES PROPOSED AS PART OF THE PROJECT

*- A detailed foundation and structural design study would be conducted for the building by a California-licensed structural engineer and a geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design and construction of the project.

*- If dewatering were necessary, any groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to reduce the amount of sediment entering the stormdrain/sewer lines.

*- Should dewatering be necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the soils report would contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in

Article 3 of the Building Code) be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed to monitor the level of the water table and other instruments would be used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. Costs for the survey and any necessary repairs to service under the street would be borne by the contractor.

- The final soils report would also recommend whether or not watering of piles of adjacent structures was necessary. If it were found to be necessary, the project sponsor would ensure that the general contractor complied.

HAZARDS

MEASURES PROPOSED AS PART OF THE PROJECT

*- An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance by the Department of Public Works of final building permits.

*- To expedite implementation of the City's emergency response plan, the project sponsor would prominently post information for building occupants concerning what to do in the event of a disaster.

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

This chapter is subject to final determination by the City Planning Commission as part of its certification process for the EIR. Chapter VI of the Final EIR will be revised, if necessary, to reflect the findings of the Commission.

No project-specific significant impacts have been identified. Mitigation measures included as part of the project are described in Chapter V., Mitigation Measures, p. 92.

Cumulative development in downtown San Francisco would have a significant effect on the environment in that it would generate cumulative traffic increases as well as cumulative passenger loadings on Muni, BART and other regional transit carriers. These cumulative transportation impacts would cause violations of total suspended particulate (TSP) and localized carbon monoxide (CO) standards in San Francisco with concomitant health effects and reduced visibility. The proposed project would contribute to these cumulative effects.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project, discusses environmental impacts associated with these alternatives, and gives the reasons the alternatives were rejected in favor of the project. Regardless of the sponsor's reasons for rejection, the City Planning Commission could approve an alternative instead of the proposed project if the Commission believed the alternative would be more appropriate for the site.

A. ALTERNATIVE A: NO PROJECT

This alternative would entail no change to the site. The proposed project would not be built there. The existing garage, with 217 valet spaces, providing mostly short-term parking, that is proposed to be demolished could be retained.

The environmental characteristics of this alternative would be generally as described in the Environmental Setting sections of this Report (see Chapter III, Setting, pp. 28 to 42, for a discussion of existing conditions). Transportation and noise effects associated with the demolition of the on-site building and building construction would not occur. Transportation, transit and air quality conditions as described in Chapter IV, Impacts, IV.E and F, pp. 43 to 91 as base conditions with cumulative development, but without the project, would exist around the site. There would be no change in the demand from the site for energy or community services. Employment on the site would not increase (as it would with the project) from about six existing to about 600 jobs. Revenues from, and costs of, the project would not result. Land uses, site views, and winds would not change. The increase in parking demand and the reduction of parking supply would not occur.

This alternative could result in the development of other office space, possibly a high-rise building comparable to the project, at another location. Alternative development

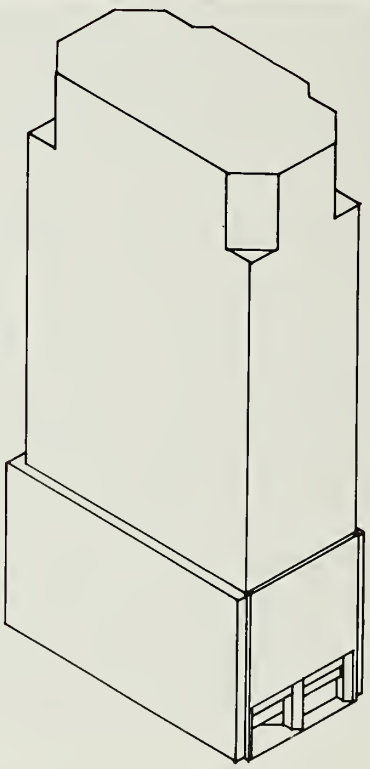
within the San Francisco Downtown area would result in many of the same impacts as described for the project. The effects of development would depend largely on the location chosen and cannot be determined accurately. This alternative would preserve the option to develop a similar or different type of building on the site in the future.

This alternative was rejected by the project sponsor because it would not provide a return on his investment and would not use the development potential of the site allowable under the Downtown Plan.

B. ALTERNATIVE B: NO TRANSFER OF DEVELOPMENT RIGHTS, 9:1 FAR

The project as proposed (with an FAR of about 14.5:1) would include the transfer of about 55,700 gross sq. ft. of development rights. This alternative considers a building without TDR. The FAR of this alternative would be 9:1, the basic allowable FAR (see Figure 19).

This alternative would include about 92,000 sq. ft. of office space compared with 147,700 gross sq. ft. for the project. The building would be 20 stories tall (about 280 ft. tall), and would feature fewer setbacks, as these are generally required by the Downtown Plan at higher heights; the alternative would have a bulkier form than the project. Retail and child care, parking and mechanical space would remain the same as with the project. Under the Downtown Plan, the ground floor, with retail, circulation and building service areas, would not be applicable to the FAR.



SOURCE: SKIDMORE,OWINGS & MERRILL

FIGURE 19
ALTERNATIVE B:
NO TDR, 9:1 FAR

As with the project, parking is assumed to be replacement short-term parking and would thus would not be applicable to the FAR.

This alternative would provide employment for about 360 employees, compared to about 600 with the proposed project. Transportation (and air quality) effects would be about 40% less than with the project. Shadow effects would also be proportionately less. Wind effects would be similar to those of the project, and perhaps slightly less. Any effect on cultural resources would be as for the project.

The sponsor has rejected this alternative because it would not provide for the development potential permitted under the Downtown Plan, and would not preserve an architecturally significant building.

C. ALTERNATIVE C: NO PARKING

This alternative would have no parking spaces; other uses, building dimensions and floor areas would be as for the project. The portion of the building which would be a service level and parking levels in the project (floors 2 to 6) would be open, forming a high lobby. A service vehicle loading space would be located on the ground floor. The developer feels he could not market these lower floors as office without views.

All impacts of this alternative would be as for the project, other than the impact on local intersections. The project would result in a decrease in on-site parking, thereby reducing traffic from the site at local intersections. This alternative would result in even less traffic at local intersections.

The project sponsor has rejected this alternative because he feels the short-term parking proposed with the project would be an asset to the building.

VIII. EIR AUTHORS AND CONSULTANTS: ORGANIZATIONS AND PERSONS CONSULTED

EIR AUTHORS

San Francisco Department of City Planning
450 McAllister Street
San Francisco, CA 94102
Environmental Review Officer: Barbara W. Sahm
EIR Supervisor: Sally Maxwell
EIR Coordinator: Carol Roos

EIR CONSULTANTS

Environmental Science Associates, Inc.
760 Harrison Street
San Francisco, CA 94107
Associate-in-Charge: Michael Rice
Project Manager: Wendy Lockwood

Bruce White, Ph.D.
(Wind Studies)
3207 Shelter Cove
Davis, CA 95616

PROJECT SPONSOR

London & Edinburgh Trust
351 California St., Suite 940
San Francisco, CA 94104
Charles Graham

PROJECT ARCHITECT

Skidmore, Owings & Merrill
One Maritime Plaza, 18th Floor
San Francisco, CA 94111
Steve O'Brien

PROJECT ATTORNEY

Morrison & Foerster
One Market Plaza, Spear St. Tower
San Francisco, CA 94105
Zane Gresham

IX. DISTRIBUTION LIST

FEDERAL AND STATE AGENCIES

State Office of Intergovernmental Management
State Clearinghouse
1400 - Tenth Street
Sacramento, CA 95814

Northwest Information Center
California Archaeological Inventory
Department of Anthropology
Sonoma State University
Rohnert Park, CA 94928
Attn: Christian Gerike

California Dept. of Transportation
Business and Transportation Agency
P.O. Box 7310
San Francisco, CA 94120
Attn: Darnall W. Reynolds,
District CEQA Coordinator

California Dept. of Transportation
Public Transportation Branch
P.O. Box 7310
San Francisco, CA 94120
Attn: David Tannehill

REGIONAL AGENCIES

Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
Attn: Irwin Mussen

CITY AND COUNTY OF SAN FRANCISCO

Bureau of Building Inspection
450 McAllister Street
San Francisco, CA 94102
Attn: Robert Levy, Superintendent

City Attorney's Office
Room 206, City Hall
San Francisco, CA 94102
Attn: Paula Jesson
Deputy City Attorney

Landmarks Preservation Advisory Board
450 McAllister Street
San Francisco, CA 94102
Attn: Jonathan Malone

Mayor's Economic Development Council
100 Larkin Street
San Francisco, CA 94102
Attn: Bill Witte, Director

Public Utilities Commission
949 Presidio Avenue, Room 150
San Francisco, CA 94115
Attn: Tom Jordan,
Director Bureau Services

Public Utilities Commission
Bureau of Energy Conservation
949 Presidio Avenue, Room 111
San Francisco, CA 94115
Attn: Barbara Moy,
Assistant Director

Recreation & Park Department
McLaren Lodge
Golden Gate Park
Fell and Stanyan Streets
San Francisco, CA 94117
Attn: Deborah Learner

San Francisco Bureau of Engineering
Streets and Highways
45 Hyde Street, Room 212
San Francisco, Ca 94102

San Francisco City Planning Commission
450 McAllister Street
San Francisco, CA 94102
Richard Allen
Susan Bierman
Roger Boas
Bernice Hemphill
Rudy Nothenberg
Toby Rosenblatt, President
Lee Woods
Norman Karasick, Alt.
Douglas G. Wright, Alt.

San Francisco Dept. of Public Works
Bureau of Engineering
Division of Streets & Highways
45 Hyde Street, Room 208
San Francisco, CA 94102
Attn: Tim A. Molinare

San Francisco Department of Public Works
Mechanical Engineering Section
45 Hyde Street, Room 222
San Francisco, CA 94102
Attn: Vijay K. Gupta

San Francisco Department of Public Works
Traffic Engineering Division
460 McAllister Street
San Francisco, CA 94102
Attn: Nelson Wong

San Francisco Fire Department
260 Golden Gate Avenue
San Francisco, CA 94102
Attn: Ed Phipps, Chief
Division of Planning & Research

San Francisco Municipal Railway
MUNI Planning Division
949 Presidio Avenue, Room 204
San Francisco, CA 94115
Attn: Peter Straus

San Francisco Real Estate Department
25 Van Ness Avenue, 4th Floor
San Francisco, CA 94102
Attn: Wallace Wortman,
Director of Property

Water Department
Distribution Division
425 Mason Street
San Francisco, CA 94102
Attn: Hans Bruno

GROUPS AND INDIVIDUALS

AIA
San Francisco Chapter
790 Market Street
San Francisco, CA 94102

Alice Suet Yee Barkley
870 Market St., Suite 913
San Francisco, CA 94102

Bay Area Council
348 World Trade Center
San Francisco, CA 94111

Albert Beck
c/o Geography Department
California State University, Chico
Chico, CA 95929

Bendix Environmental Research, Inc.
1390 Market Street, Suite 902
San Francisco, CA 94102

Tony Blaczek
Finance Department Coldwell Banker
1 Embarcadero Center, 23rd Floor
San Francisco, CA 94111

Peter Bosselman
Environmental Simulation Laboratory
119 Wurster Hall
University of California
Berkeley, CA 94720

Roger Boyer Associates
215 Leidesdorff
San Francisco, CA 94111

Georgia Brittan
870 Market Street, Room 1119
San Francisco, CA 94102

Brobeck, Phleger, Harrison
One Market Plaza
San Francisco, CA 94105
Attn: Susan R. Diamond

Michael Buck
1333 - 35th Avenue
San Francisco, CA 94122

David Capron
Lincoln Property Company
222 Sansome Street
San Francisco, CA 94104

Dale Carlson
369 Pine St., #800
San Francisco, CA 94104

Charter Commercial Brokerage Company
Market Research Department
Two Embarcadero, #1860
San Francisco, CA 94111

Chickering & Gregory
3 Embarcadero Center
23rd Floor
San Francisco, CA 94111
Attn: Kent Soule

Coalition for San Francisco
Neighborhoods
Mrs. Dorice Murphy
175 Yukon Street
San Francisco, CA 94114

Coldwell Banker
One Embarcadero Center, 23rd Floor
San Francisco, CA 94120
Attn: Mark P. Geisreiter

Coldwell Banker
One Embarcadero Center, 23rd Floor
San Francisco, CA 94120
Attn: Richard J. Leiper

Joseph Cortiz
2853 22nd Street
San Francisco, CA 94110

Cushman & Wakefield of California, Inc.
Bank of America Center
555 California Street, Suite 2700
San Francisco, CA 94104
Attn: James A. Hogland

Calvin Dare
Cushman Wakefield
555 California - Suite 2700
San Francisco, CA 94104

Deringer Development Group
50 California Street, Suite 1205
San Francisco, CA 94111
Attn: Jonathan Sofser

Alex Diamondidis
58 Varennes
San Francisco, CA 94133

James S. Dielschneider
258-B Red Rock Way
San Francisco, CA 94131

DKS Associates
1419 Broadway, Suite 700
Oakland, CA 94612 - 2069

Rita Dorst
RB International Services
9 Boston Ship Plaza
San Francisco, Ca 94111

Downtown Association
582 Market Street
San Francisco, CA 94105
Attn: Mr. Lloyd Pflueger

Downtown Senior Social Services
295 Eddy Street
San Francisco, CA 94102

Michael W. Dyett
Blayney-Dyett
70 Zoe Street
San Francisco, CA 94103

Environmental Impact Planning
319 Eleventh Street
San Francisco, CA 94103
Attn: Cathleen Galloway Brown

Environmental Planning & Research, Inc.
649 Front Street
San Francisco, CA 94111
Attn: Leslie de Boer

Farella, Braun & Martel
235 Montgomery Street
San Francisco, CA 94104

Friends of the Earth
1045 Sansome Street #404
San Francisco, CA 94111
Attn: Connie Parrish

The Foundation for San Francisco's
Architectural Heritage
2007 Franklin Street
San Francisco, CA 94109
Attn: Mark Ryser
Deputy Director

Fuller Commercial Brokerage
353 Sacramento Street, Suite 500
San Francisco, CA 94111
Attn: Kenneth T. Sproul

Gensler and Associates
550 Kearny Street
San Francisco, CA 94103
Attn: Jane Winslow

Charles T. Gill
The Aspen Group West, Inc.
505 Sansome Street, Suite 1005
San Francisco, CA 94111

Goldfarb & Litman
491 - 9th Street
Oakland, CA 94607
Attn: Paula Crew

Annette M. Granucci
Commercial News Publishing Co.
125 Twelfth Street
San Francisco, CA 94103

Gruen Gruen & Associates
564 Howard Street
San Francisco, CA 94105

Donald Head & Associates
109 Minna Street, #293
San Francisco, CA 94105

Heller, Ehrman, White & McAuliffe
44 Montgomery Street - 32nd Floor
San Francisco, CA 94104
Attn: Robert L. Gibney, Jr.

Valerie Hersey
Munsell Brown
950 Battery
San Francisco, CA 94111

Sue Hestor
4536 - 20th Street
San Francisco, CA 94114

Carl Imparato
1205 Garfield
Albany, CA 94705

Jefferson Associates, Inc.
683 McAllister Street
San Francisco, CA 94102
Attn: Gordon Jacoby

Jones Lang Wootton
710 One Embarcadero Center
San Francisco, CA 94111
Attn: Sheryl Bratton

Lee & Fan
Architecture & Planning, Inc.
580 Market St., Suite 300
San Francisco, CA 94104
Attn: Robert Fan, Jr.

Legal Assistance to the Elderly
Brent Kato
333 Valencia Street
San Francisco, CA 94103

Carole Lester
Lawyers Title Company of San Francisco
One California Street, Suite 2200
San Francisco, CA 94111

Barry Livingston
Urban Center Development Limited
One Embarcadero Center, Suite 2216
San Francisco, CA 94111

Doug Longyear
Finance Department
Coldwell Banker
1 Embarcadero Center, 23rd floor
San Francisco, CA 94111

Marathon U.S. Realties, Inc.
595 Market Street, Suite 1330
San Francisco, CA 94105
Attn: Rolf Wheeler

Bruce Marshall
San Francisco Muni Coalition
600 Montgomery Street, 13th Floor
San Francisco, CA 94111

Milton Meyer & Co.
One California Street
San Francisco, CA 94111
Attn: Marcus C. Wood

Robert Meyers Associates
582 Market Street, Suite 1208
San Francisco, CA 94104

Page Anderson & Turnbull
364 Bush Street
San Francisco, CA 94104

Pillsbury, Madison & Sutro
P.O. Box 7880
San Francisco, CA 94120
Attn: Susan Pearlstine

Planning Analysis & Development
530 Chestnut
San Francisco, CA 94133
Attn: Gloria Root

Mrs. G. Bland Platt
339 Walnut Street
San Francisco, CA 94118

Neville Price & Associates
25 Ecker Square, Suite 1050
San Francisco, CA 94105

Bruce Raful
Rothschild Cappiello
332 Pine Street, Suite 511
San Francisco, CA 94104

Research & Decisions Corporation
375 Sutter Street, Suite 300
San Francisco, CA 94108
Attn: Deborah McNamee

David P. Rhoades
120 Montgomery Street, Suite 1600
San Francisco, CA 94104

San Francisco Beautiful
41 Sutter Street
San Francisco, CA 94104
Attn: Mrs. H. Klussmann, President

San Francisco Building and
Construction Trades Council
400 Alabama Street, Room 100
San Francisco, CA 94110
Attn: Stanley Smith

San Francisco Chamber of Commerce
465 California Street
San Francisco, CA 94105
Attn: Richard Morten

San Francisco Christian School
699 Serramonte Blvd.
Daly City, CA 94014
Mr. John Innes

San Francisco Convention &
Visitors Bureau
201 3rd Street, Suite 900
San Francisco, CA 94103
Attn: George D. Kirkland,
Executive Director

San Francisco Ecology Center
13 Columbus Avenue
San Francisco, CA 94111

San Francisco Labor Council
1855 Folsom Street
San Francisco, CA 94103
Attn: Bernard Speckman

San Francisco Organizing Project
1095 Market Street, Suite 209
San Francisco, CA 94103

San Francisco Planning &
Urban Research Association
312 Sutter Street
San Francisco, CA 94108

San Franciscans for Reasonable Growth
241 Bartlett Street
San Francisco, CA 94110
Attn: David Jones

San Francisco Forward
150 California Street, Suite 200
San Francisco, CA 94111
Attn: Harriet B. Levy

San Francisco Tomorrow
942 Market, Room 505
San Francisco, CA 94102
Attn: Tony Kilroy

John M. Sanger & Associates
101 California Street, 35th Floor
San Francisco, CA 94111

Sedway Cooke Associates
350 Pacific Avenue, 3rd Floor
San Francisco, CA 94114

Richard Seeley & Co.
1814 Franklin Street, #3
Oakland, CA 94612

Senior Escort Program
South of Market Branch
814 Mission Street
San Francisco, CA 94100
Attn: Neighborhood Coordinator

Shartsis, Freise & Ginsburg
255 California Street, 9th Floor
San Francisco, CA 94111
Attn: Dave Kremer

Sierra Club
530 Bush Street
San Francisco, CA 94105
Attn: Becky Evans

Robert Snook
Wells Fargo Bank
475 Sansome Street, 19th Floor
San Francisco, CA 94111

Mark R. Solit
Embarcadero Center, Ltd.
Four Embarcadero, Suite 2600
San Francisco, CA 94111

South of Market Alliance
74 Langton Street
San Francisco, CA 94103

Square One Film & Video
725 Filbert Street
San Francisco, CA 94133

Wayne E. Stiefvater, President
Appraisal Consultants
701 Sutter Street
San Francisco, CA 94109

Robert S. Tandler
Steefel, Levitt & Weiss
One Embarcadero Center, 29th Floor
San Francisco, CA 94111

Tenants and Owners Development Corp.
230 - Fourth Street
San Francisco, CA 94103
Attn: John Elberling

Rod Teter
Cahill Construction Company
425 California Street, Suite 2300
San Francisco, CA 94103

Jerry Tone, Loan Officer
Real Estate Industries Group
Wells Fargo Bank, N.A.
475 Sansome Street, 19th floor
San Francisco, CA 94111

Timothy A. Tosta
Tosta & Browning Law Corporation
785 Market St., Suite 1400
San Francisco, CA 94103

Kathy Van Velsor
19 Chula Lane
San Francisco, CA 94114

Steven Weicker
899 Pine Street, #1610
San Francisco, CA 94108

Calvin Welch
Council of Community Housing Organizations
409 Clayton Street
San Francisco, CA 94117

Howard Wexler
Feldman, Waldman & Kline
235 Montgomery, 27th floor
San Francisco, CA 94104

Eunice Willette
1323 Gilman Avenue
San Francisco, CA 94124

Bethea Wilson & Associates
Art in Architecture
2028 Scott, Suite 204
San Francisco, CA 94115

Marie Zeller
Whisler-Patri
590 Folsom Street
San Francisco, CA 94107

ADJACENT PROPERTY OWNERS

267/1
Chan So Wah & Sons, Inc.
c/o F.S Tom
838 Grant Avenue
San Francisco, CA 94108

267/2
Amir H. & Nahid F. Zandvakili
11 Soleto Avenue
Piedmont, CA 94611

267/3,4
Brothers International, Inc.
100 Bush Street, #301
San Francisco, CA 94104

267/10
Grant Co.
114 Sansome Street
San Francisco, CA 94104

267/11
Sanjaylyn Company
400 Robert Magilligan-Fritz Co.
735 Market St., #500
San Francisco, CA 94104

267/16
Calprop Investments Ltd.
c/o William D McKee
600 Montgomery St., 12th Floor
San Francisco, CA 94104

261/5
Liberty Mutual Insurance Co.
175 Berkeley Street
Boston, MA 02117

261/6
Norland Co.
c/o Susan E Shipley
221 Pine Street, #600
San Francisco, CA 94104

261/7
Wells Fargo Bank, James, Virginia and Harry Watkins
c/o Bressie & Co.
220 Sansome Street, #16
San Francisco, CA 94104

MEDIA

Leland S. Meyerzove
KPOO - FM
P.O. Box 6149
San Francisco, CA 94101

San Francisco Bay Guardian
2700 - Nineteenth Street
San Francisco, CA 94110
Attn: Patrick Douglas, City Editor

San Francisco Business Journal
635 Sacramento Street, Suite 310
San Francisco, CA 94111
Attn: Kirstin E. Downey

San Francisco Chronicle
925 Mission Street
San Francisco, CA 94103
Attn: Evelyn Hsu

San Francisco Examiner
P.O. Box 7260
San Francisco, CA 94120
Attn: Gerald Adams

San Francisco Progress
851 Howard Street
San Francisco, CA 94103
Attn: E. Cahill Maloney

The Sun Reporter
1366 Turk Street
San Francisco, CA 94115

Tenderloin Times
146 Leavenworth Street
San Francisco, CA 94102
Attn: Rob Waters

LIBRARIES

Cogswell College Library
600 Stockton Street
San Francisco, CA 94108

Document Library
City Library - Civic Center
San Francisco, CA 94102
Attn: Faith Van Liere

Environmental Protection Agency Library
215 Fremont Street
San Francisco, Ca 94105
Attn: Jean Circiello

Stanford University Libraries
Jonsson Library of Government Documents
State and Local Documents Division
Stanford, CA 94305

Government Publications Department
San Francisco State University
1630 Holloway Avenue
San Francisco, CA 94132

Hastings College of the Law - Library
200 McAllister Street
San Francisco, CA 94102-4978

Institute of Government Studies
1209 Moses Hall
University of California
Berkeley, CA 94720

PROJECT SPONSOR

London & Edinburgh Trust
351 California St., Suite 940
San Francisco, CA 94104
Attn: Charles Graham

PROJECT ARCHITECT

Skidmore, Owings & Merrill
One Maritime Plaza, 18th Floor
San Francisco, CA 94111
Attn: Steve O'Brien

PROJECT ATTORNEY

Morrison & Foerster
One Market Plaza
Spear St. Tower
San Francisco, CA 94105
Attn: Zane Gresham

X. APPENDICES

DEPARTMENT OF CITY PLANNING 450 McALLISTER STREET • SAN FRANCISCO, CALIFORNIA 94102

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: December 27, 1985

Lead Agency: City and County of San Francisco, Department of City Planning
450 McAllister Street - 5th Floor, San Francisco, CA 94102

Agency Contact Person: Carol Roos Telephone: (415) 558-5261

Project Title: 84.432E:
235 Pine Street
Office Building

Project Sponsor: London and Edinburgh Trust

Project Contact Person: Charles Graham

Project Address: 225-241 Pine Street, South side between Battery and Sansome Streets.

Assessor's Block(s) and Lot(s): Lot 15, in Assessor's Block 267

City and County: San Francisco

Project Description: Demolition of three-story (plus basement) concrete, 196-space valet parking garage. Contruction of a 376-foot-tall, 27-story (plus basement) building with about 147,700 gross sq.ft. (gsf) office; 2,500 gsf retail; and 100 valet parking spaces and one truck loading space.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Please see attached Initial Study

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: January 6, 1986.

An appeal requires: 1) a letter specifying the grounds for the appeal, and;
2) a $35.00 filing fee.

Barbara W. Sahm
BARBARA W. SAHM, Environmental Review Officer

BWS:eh
8362A

ER5 6/85

Initial Study
235 PINE STREET
84.432E

I. PROJECT DESCRIPTION

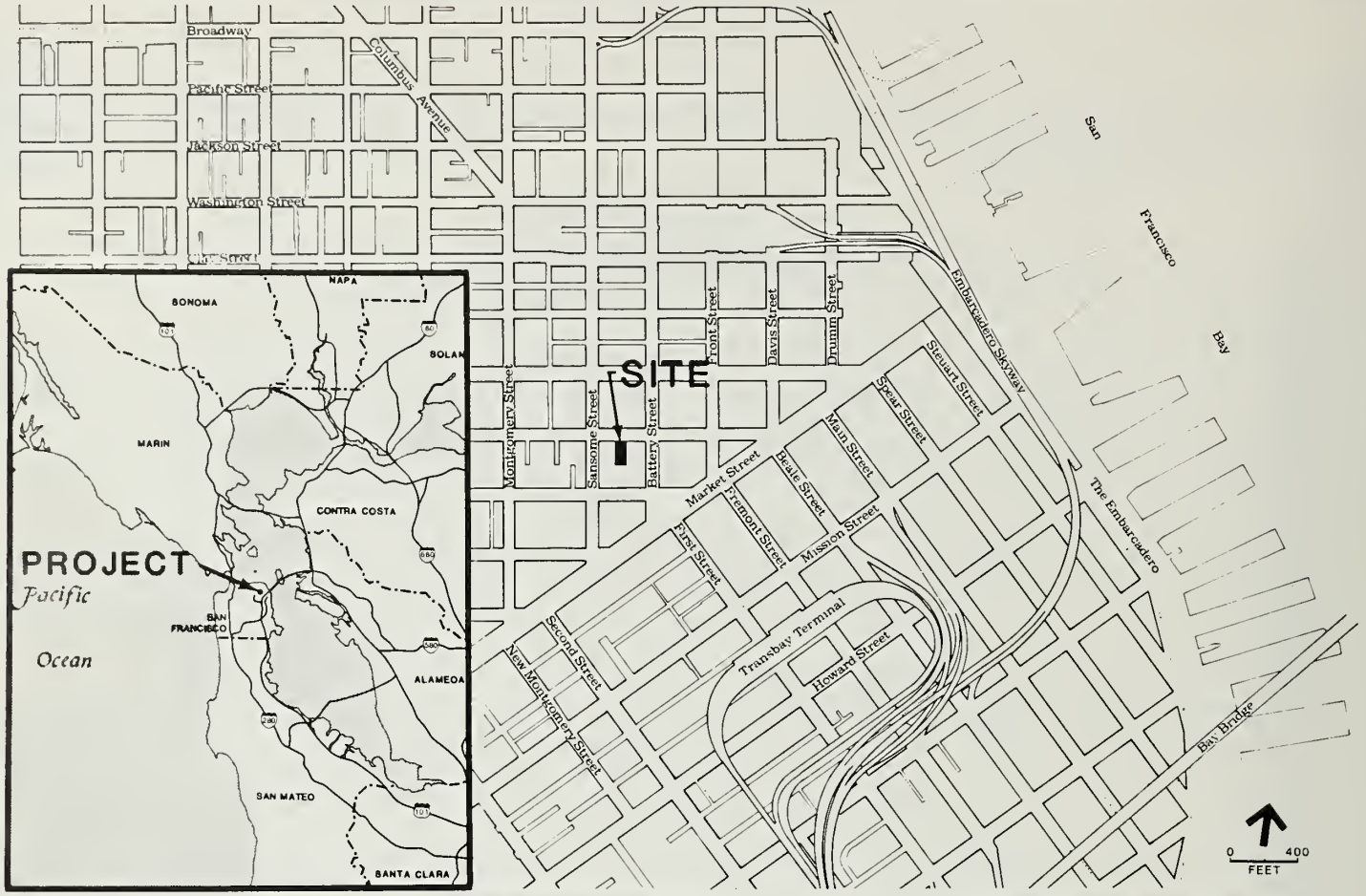
The proposed project would be the demolition of a three-story (plus basement) concrete parking garage (the only building on-site) and construction of a 376-ft.-tall, 27-story (plus basement) office building. The new building would include mechanical basement space, a ground-floor lobby with retail space, a service level, six floors of parking, 18 floors of office space and a mechanical penthouse. The project would include about 147,700 gross square feet (gsf) of office and 2,500 gsf of ground floor retail space, where there is now none, and 32,600 gsf of parking (about 100 valet spaces) excluding entry and exit ramps compared with the existing 20,000 gsf (about 196 valet spaces on three levels, including the roof). Vehicle access would be from Pine St. A second-floor service level would contain a truck-loading space and valet parking drop-off. Parking would be provided on floors three through eight. The Floor Area Ratio of the project would be about 14.5:1. The project would use about 55,700 gsf of transferred development rights (TDR).

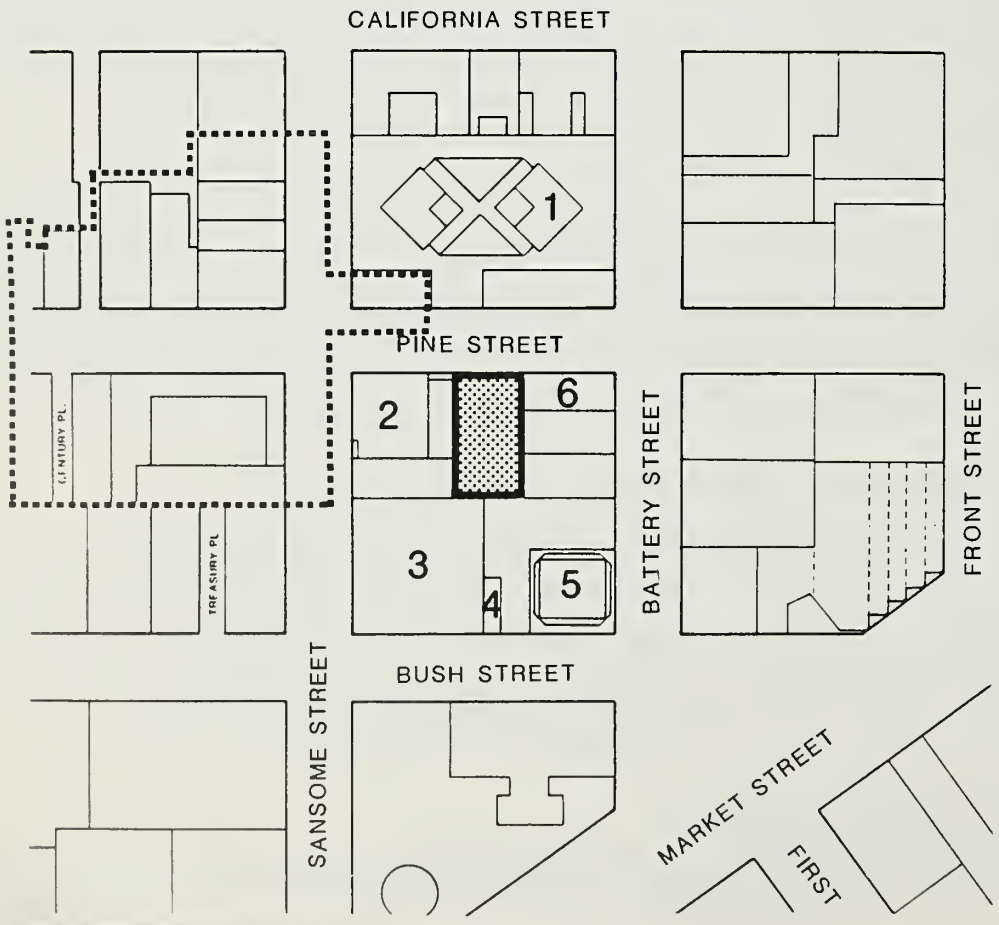
The project sponsor is London & Edinburgh Trust (LET). The project architect is Skidmore, Owings & Merrill, San Francisco. Project plans are on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister St., San Francisco.

The 10,220-sq.-ft. project site is Lot 15 of Assessor's Block 267. The site fronts Pine St. between Battery and Sansome Sts. in the Financial District, within the C-3-O (Downtown Office) Use District (see Figure 1) and a 450-S Height and Bulk District. The basic allowable Floor Area Ratio is 9:1.

Adjacent to the site on the east are the six-story Donahoe Building, a four-story structure and a three-story structure. The 29-story Shell Building and the 14-story Adam Grant Building abut the site to the south. The 16-story Hong Kong Bank building and a six-story building abut the site on the west. All are office-retail buildings. The 47-story 345 California St. office and hotel development is under construction across Pine St. from the project site on the north.

The Pine St. elevation of the proposed project is shown in Figure 2, p 3.





PROJECT SITE
(Assessor's Block 267, Lot No.15)

0 100
FEET

LEGEND:

1. 345 CALIFORNIA
2. HONG KONG BANK BUILDING
3. ADAM GRANT BUILDING
4. HEINEMAN BUILDING
5. SHELL BUILDING
6. DONAHOE BUILDING

PINE/SANSOME CONSERVATION DISTRICT

FIGURE 1
235 PINE
PROJECT LOCATION
SOURCE: ESA

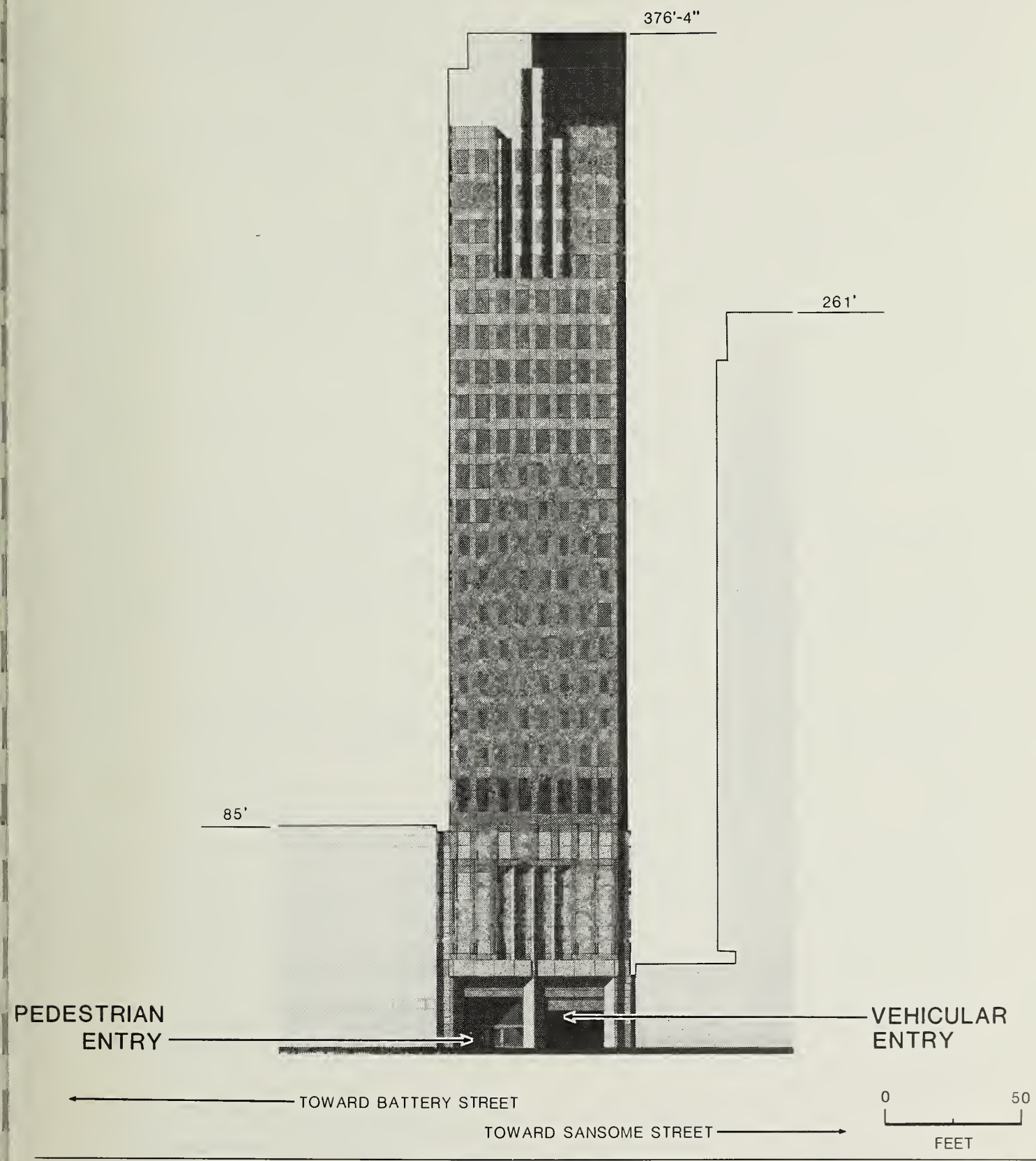


FIGURE 2
235 PINE
PINE STREET ELEVATION

SOURCE: SKIDMORE, OWINGS & MERRILL

II. INTRODUCTION

A tiered EIR will be prepared for the proposed 235 Pine St. project pursuant to Sections 21093 and 21094 of the Public Resources Code, California Environmental Quality Act (CEQA). The EIR will be tiered from the Downtown Plan EIR (EE81.3, certified October 18, 1984) and will analyze project-specific impacts. The EIR will discuss potentially significant effects that were not examined in the Downtown Plan EIR and will include applicable mitigation measures for site specific effects. Cumulative impacts of the development forecast in the C-3 districts to the year 2000 are addressed in the Downtown Plan EIR. That cumulative analysis will not be repeated in the EIR for this project. The Downtown Plan EIR may be examined at the Department of City Planning, 450 McAllister St.; the San Francisco Main Library; and various branch libraries.

Tiered Environmental Impact Report

Where a prior environmental impact report has been prepared and certified for a program, plan, policy or ordinance, the lead agency for a later project that meets the specified requirements is required (as of January 1, 1986) to examine significant effects of the later project upon the environment, with exceptions, by using a tiered report.

Agencies are required to tier EIR's which they prepare for separate but related projects including general plans, zoning changes and development projects, in order to avoid repetitive discussions of the same issues in successive EIR's and ensure that EIR's prepared for later projects which are consistent with a previously approved policy, plan, program, or ordinance concentrate on environmental effects which may be mitigated or avoided in connection with the decision on each later project. Tiering is appropriate when it helps a public agency to focus on the issues ripe for decision at each level of environmental review and in order to exclude duplicative analysis of environmental effects examined in previous environmental impact reports. Environmental impact reports shall be tiered whenever feasible, as determined by the lead agency.

The law directs that where a prior EIR has been prepared and certified as noted above, the lead agency shall examine significant effects of the later project on the environment by using a tiered EIR, except that the report on

the later project need not examine those effects which were either mitigated or avoided as a result of the prior EIR, or, examined at a sufficient level of detail in the prior EIR to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

The Initial Study is to assist the lead agency in making the determinations required for tiering.

III. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

A. EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

The proposed project is examined in this Initial Study to identify potential effects on the environment. The cumulative impacts of growth in the C-3 districts to the year 2000 were adequately analyzed in the Downtown Plan EIR. That analysis of cumulative impacts remains current and valid and the determination during certification of that EIR regarding significant effects remains unchanged. Some project-specific potential effects have been determined to be potentially significant, and will be analyzed in an environmental impact report (EIR). They include: the relationship of the proposed building to the Master Plan; visual quality; urban design; shadows; wind; localized transportation; traffic-generated air quality effects; and cultural resources (archaeology).

B. EFFECTS FOUND NOT TO BE SIGNIFICANT

The following potential impacts were determined either to be insignificant or to be mitigated through measures included in the project. These items require no further environmental analysis in the EIR:

Land Use: The project would replace a three-story valet parking garage with office, retail and parking uses similar to those in the project area.

Glare: The project would not be faced in any reflective materials (see the mitigation measure on p. 25).

Population: The project would comply with the Office Affordable Housing Production Program ordinance. Cumulative and indirect effects including those of the project are addressed in the EIR prepared for the Downtown Plan.

Noise: After completion, building operation and project-related traffic would not perceptibly increase noise levels in the project vicinity. Operational noise would be regulated by the San Francisco Noise Ordinance, and the project would conform to the Noise Guidelines of the Master Plan.

The project would include piledriving and other noise-producing construction activities. This noise effect would be limited in duration, and the project would include measures (such as predrilling pile holes and restricting hours of piledriving; see p. 25) to reduce noise impacts from construction activities.

Construction Air Quality: Construction of the project would have short-term effects on air quality in the project vicinity. A mitigation measure to reduce particulate and hydrocarbon emissions generated during construction activities to insignificant level is included in the project (see p. 26).

Utilities/Public Services: The proposed project would increase demand for utilities and public services, but would not require additional personnel or equipment.

Biology: The proposed project would not affect plants or animals, as the site is completely covered by buildings.

Geology/Topography: A preliminary geotechnical report has been prepared for the project and a final detailed geotechnical report would be prepared prior to commencement of construction by a California-licensed engineer. The project sponsor and contractor would follow recommendations made in the final report regarding any excavation and construction on the site. A measure to mitigate potential impacts associated with excavation and dewatering is included in the project (see p. 26).

Water: The proposed project would use an average of about 9,150 gallons of water per day. The project would not affect drainage patterns or water

quality because the site is entirely covered by impermeable surfaces. See also the mitigation measure discussed above regarding excavation and dewatering.

Energy: The project would be designed to surpass performance standards of Title 24 of the California Administrative Code. Its annual energy budget would be about 123,000 Btu per sq. ft. Peak electrical energy use would coincide with PG&E's systemwide peaks; peak natural gas use would not coincide with PG&E's systemwide peak. Cumulative and indirect effects including those of the project are addressed in the EIR prepared for the Downtown Plan. Energy mitigation measures would be included as part of the project (see p. 27).

Hazards: The project would neither cause health hazards, nor be affected by hazardous uses. Mitigation measures to reduce any conflicts with the City's Emergency Response Plan are included in the project.

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS	Not Applicable	Discussed
1. Discuss any variances, special authorization, or changes proposed to the City Planning Code or Zoning Map, if applicable.	___	X
*2. Discuss any conflicts with the Comprehensive Plan of the City and County of San Francisco, if applicable.	___	X
*3. Discuss any conflicts with any other adopted environmental plans and goals of the City or Region, if applicable.	___	X

The project would be consistent with the Downtown Plan (with allowable exceptions -- see below) and the zoning for the site, and would thus meet this requirement for a tiered EIR. The project may require exceptions to the Downtown Plan Planning Code, under Section 309 of the Code, regarding separation of towers, and wind comfort criterion. The project's relation to the Downtown Plan and Planning Code will be discussed in the EIR.

The project would not conflict with adopted environmental plans or goals.

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

B. ENVIRONMENTAL EFFECTS

	Yes	No	Discussed
1. Land Use. Could the project:			
*a. Disrupt or divide the physical arrangement of an established community?	___	X	X
b. Have any substantial impact upon the existing character of the vicinity?	___	X	X

The project site is located in San Francisco's Financial District, an area characterized by office buildings of various ages and sizes. Upper floors of structures are generally office with ground floor banking and office support retail facilities. The project would be an infill office project, replacing a three-story valet parking garage.

Section 210.3 of the City Planning Code states that the C-3-O District, "playing a leading role in finance corporate headquarters and service industries, and serving as an employment center for the region, consists primarily of high quality office development." The project would be compatible with the C-3-O land use designation.

On the north across Pine St. is the Dollar Block, or 345 California St. project (formerly known as 333 California St., EE81.249 and 84.565E); this development will include new office, retail and hotel uses, and also renovated older office structures. The 345 California St. project is currently under construction, and is scheduled for completion in February, 1986. The proposed project would be consistent with uses in the project area.

The replacement by the project of a parking garage with a mixed-use office building, similar in use and scale to development on the block and buildings in the area, would not disrupt or divide the physical arrangement of the area or have a substantial impact on the existing character of the vicinity.

	Yes	No	Discussed
2. Visual Quality. Could the project:			
*a. Have a substantial, demonstrable negative aesthetic effect?	X	___	X
b. Substantially degrade or obstruct any scenic view or vista now observed from public areas?	___	X	X
c. Generate obtrusive light or glare substantially impacting other properties?	___	X	X

The project's appearance and possible effects on views will be discussed in the EIR. Reflective glass would not be used in the project; the building would not result in glare affecting other properties. See the mitigation measure on p. 25.

3. Population. Could the project:	Yes	No	Discussed
*a. Induce substantial growth or concentration of population?	___	X	X
*b. Displace a large number of people (involving either housing or employment)?	___	X	X
c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	___	X	X

Project specific employment information regarding number and type of employees on site, with existing conditions and with the project will be included in the EIR.

The project would generate a demand for 57 dwelling units according to the Office Affordable Housing Production Program formula. The project must comply with the OAHPP, Ordinance No. 358-85. Cumulative and indirect effects including those of this project are addressed, and may be found in, the Downtown Plan EIR. That analysis will not be repeated in the 235 Pine St. EIR.

The Downtown Plan EIR concluded that population effects resulting from development in the C-3 districts under the Downtown Plan would not be significant. That conclusion would remain true with the project. The Downtown Plan EIR (EE81.3, Final EIR certified October 18, 1984) may be examined at the Department of City Planning, 450 McAllister St., 6th Floor; the San Francisco Main Library and various branch libraries.

4. Transportation/Circulation. Could the project:	Yes	No	Discussed
*a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	___	X**	X
b. Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	___	X**	X
c. Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	___	X**	___
d. Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	X	___	X

** The site specific impacts created by this project are not expected to be significant, as noted in the discussion below. However, the localized effects of the project will be discussed in the EIR.

The project would decrease the number of parking spaces on the site by about one-half, from 196 to 100 spaces, and, therefore, localized traffic impacts from the project are not expected to be worse with the project than with existing conditions. However, the localized transportation impacts of the project will be analyzed in the EIR.

The cumulative transportation effects of development in the C-3 districts including the project are analyzed in the Downtown Plan EIR. The Planning Commission in certifying the Downtown Plan EIR determined that cumulative transportation impacts would have a significant impact. The cumulative analysis in the Downtown Plan regarding transportation will be incorporated by reference into the 235 Pine St. EIR, and the project effects in relation to cumulative impacts will be discussed. The analysis in the Downtown Plan EIR remains current regarding future and project conditions.

5. Noise. Could the project:	Yes	No	Discussed
*a. Increase substantially the ambient noise levels for adjoining areas?	___	X	X
b. Violate Title 25 Noise Insulation Standards, if applicable?	___	X	___
c. Be substantially impacted by existing noise levels?	___	X	___

Project Operation

The noise environment of the site, like all of downtown San Francisco, is dominated by vehicular traffic noise. The Downtown Plan EIR indicates a day-night average noise level (Ldn) of 75 dBA on Pine St. adjacent to the site in 1984./1,2/ The Environmental Protection Element of the Master Plan contains guidelines for determining the compatibility of various land uses with different noise environments. For office uses the guidelines recommend no special noise control measures in an exterior noise environment up to an Ldn of 70 dBA. For noise levels of 75 dBA and above the guidelines recommend an analysis of noise reduction requirements and inclusion of noise insulation features in the building design. The project sponsor has indicated that noise insulation measures would be included as part of the design if recommended (see p. 25). The proposed structure would not include housing, so Title 25 Noise Standards would not be applicable.

Project operation would not result in perceptibly greater noise levels than those existing in the area. The amount of traffic generated by the project

during any hour of the day, and cumulative traffic increases at the time of project completion, would cause traffic noise levels to increase by one dBA or less. To produce a noticeable increase in environmental noise, a doubling of existing traffic volume would be required; traffic increases of this magnitude would not occur with anticipated cumulative development including the project./3/

Project Construction

Project construction would take place over about 20 months, and would increase noise levels in surrounding areas. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between noise source and listener.

Typical construction noise levels, other than for pile driving range from 78 to 89 dBA at 50 ft. Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the City Police Code). The ordinance requires that sound levels of construction equipment other than impact tools not exceed 80 dBA at a distance of 100 ft. from the source. Impact tools (jackhammers, piledrivers, impact wrenches) must have both intake and exhaust muffled to the satisfaction of the Director of Public Works. Section 2908 of the Ordinance prohibits construction work at night, from 8:00 p.m. to 7:00 a.m., if noise would exceed the ambient noise level by five dBA at the project property line, unless a special permit is authorized by the Director of Public Works.

The project would be required to comply with the San Francisco Noise Ordinance, San Francisco Police Code Section 2909, "Fixed Source Noise Levels," which regulates mechanical equipment noise. The project site and surrounding area are within a C-3-O district. In this district, the ordinance limits equipment noise levels at the property line to 70 dBA between 7 a.m. and 10 p.m. and 60 dBA between the hours of 10 p.m. and 7 a.m.

The project would require about three to four weeks of piledriving. Conventional unmuffled and unshielded piledrivers emit noise levels of 100 to 110 dBA at a distance of 50 ft. each time the driver strikes the pile. The Department of Public Works allows piledriving operations under certain

conditions, which may include specifying relatively quiet equipment, predrilling pile holes, and/or specifying hours of operation to reduce the number of people exposed to noise effects.

In buildings across Pine St. which have operable windows, noise levels could reach as high as 95 dBA with the windows open and 85 dBA with the windows closed during piledriving. For buildings adjacent to the project site, piledriving noise could reach as high as 90 dBA inside the buildings. Adjacent and nearby buildings would also experience vibrations from piledriving. These vibrations have been found to be more disturbing to some people than high noise levels.

Nearly all of the structures in the project vicinity are office buildings (many with operable windows). The 345 California St. building is scheduled for completion in February 1986; construction activities on the project site could disturb residents in the proposed hotel atop 345 California St. The sponsor would coordinate the hours of pile driving with the Department of Public Works; pile driving would be limited to result in least disturbance to neighboring uses (see mitigation measure, p. 25). Pile holes would be predrilled, which would reduce the duration of piledriving activities. Other measures are also included in the project to reduce construction noise (see p. 25). Noise from project operation and construction will not be discussed in the EIR.

NOTES - Noise

/1/ San Francisco Department of City Planning, Downtown Plan Environmental Impact Report (EIR), EE81.3, certified October 18, 1984, Vol. 1, Table IV.J.2.

/2/ dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulates the response of the human ear to various frequencies of sound.

Ldn, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises; noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.

/3/ See Downtown Plan EIR (EE81.3) Continuous Section IV.E. generally and Section IV.J., pp. IV.J.8-18. Increases of 1 dBA or less in environmental noise are not noticeable by most people outside a laboratory situation (National Academy of Sciences, Highway Research Board, Rsch. Rpt. No. 117 (1971)). (See also FHWA Highway Traffic Noise Prediction Model, Rpt. #FHWA-RD-77-108, December 1978, p. 8, regarding doubling of traffic volumes producing increases of 3 dBA or more, which are noticed by most people.)

6. Air Quality/Climate. Could the project:	Yes	No	Discussed
*a. Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	___	X**	X
*b. Expose sensitive receptors to substantial pollutant concentrations?	___	X	X
c. Permeate its vicinity with objectionable odors?	___	X	___
d. Alter wind, moisture or temperature (including sun shading effects), so as to substantially affect public areas, or change the climate either in the community or the region?	X	___	X

Demolition, grading and other construction activities would temporarily affect local air quality for about 20 months, causing a temporary increase in particulate dust and other pollutants. Dust emissions during demolition and excavation would increase particulate concentrations near the site. Dustfall can be expected at times on surfaces within 200 to 800 ft. Under high winds exceeding 12 miles per hour, localized effects including human discomfort might occur downwind from blowing dust. Construction dust is composed primarily of large particles that settle out of the atmosphere more rapidly with increasing distance from the source. More of a nuisance than a hazard for most people, this dust could affect persons with respiratory diseases as well as sensitive electronics or communication equipment. The project sponsor would require the contractor to wet down the construction site twice a day during construction to reduce particulates by at least 50% (see p. 26).

Diesel-powered equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons, and particulates. This would increase local concentrations temporarily but would not be expected to increase the frequency of exceedances of air quality standards. The project sponsor would require the project contractor to maintain and operate construction equipment in such a way as to minimize exhaust emissions (see p. 26). Construction air quality effects require no further analysis.

The cumulative effects on air quality of traffic emissions from traffic generated by development in the C-3 districts including the project are analyzed in the Downtown Plan EIR. The Planning Commission in certifying the Downtown Plan EIR determined that cumulative air quality impacts would have a significant impact. The cumulative analysis in the Downtown Plan EIR regarding air quality will be incorporated by reference and the project effect in relation to cumulative effects will be discussed. The analysis and conclusions of the Downtown Plan EIR remain current regarding future and project conditions.

The shadow effects of the project will be discussed in the EIR./1/

Section 148 of the Planning Code establishes comfort criteria of 11 mph equivalent wind speed for pedestrian areas and 7 mph for seating areas, not to be exceeded more than 10% of the time, year-round between 7:00 a.m. and 6:00 p.m. In order to determine the wind effects of the project and its compliance with the Downtown Plan wind criteria, wind tunnel tests were conducted./2/ The analysis of project wind effects will be summarized in the project EIR.

NOTES - Air Quality/Climate

/1/ A shadow analysis was prepared for the project by Environmental Science Associates. These shadow diagrams are on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister St., Sixth Floor, San Francisco, CA 94102.

/2/ The wind tunnel analysis was prepared by B. R. White, Ph.D for Environmental Science Associates, and is on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister St., Sixth Floor, San Francisco, CA 94102.

7. Utilities/Public Services. Could the project:	Yes	No	Discussed
*a. Breach published national, state or local standards relating to solid waste or litter control?	___	X	___
*b. Extend a sewer trunk line with capacity to serve new development?	___	X	X
c. Substantially increase demand for schools, recreation or other public facilities?	___	X	X
d. Require major expansion of power, water, or communications facilities?	___	X	X

Providers of utilities and public services have been contacted and have indicated that existing capacities are adequate to serve the proposed project. Statements from utility providers are available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., Sixth Floor, San Francisco, CA 94102.

The Downtown Plan EIR concluded that demand for utilities and public services resulting from development in the C-3 districts under the Downtown Plan would not be significant. The Downtown Plan EIR (EE81.3, Final EIR certified October 18, 1984) may be examined at the Department of City Planning, 450 McAllister St., 6th Floor; the San Francisco Main Library and various branch libraries.

8. Biology. Could the project:	Yes	No	Discussed
*a. Substantially affect a rare or endangered species of animal or plant or the habitat of the species?	___	X	___
*b. Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	___	X	X
c. Require removal of substantial numbers of mature, scenic trees?	___	X	___

The site is covered by impervious surfaces. The project would not affect plant or animal habitats. This topic will not be discussed in the EIR.

9. Geology/Topography. Could the project:	Yes	No	Discussed
*a. Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction)?	___	X	X
b. Change substantially the topography or any unique geologic or physical features of the site?	___	X	___

The project site is at five ft., San Francisco City Datum (SFD)./1/ Soils at the site are composed of primarily clayey sand fill and dune sand, loose to medium-dense with rubble (approximately 22 ft.), underlain by 15 ft. of Bay Mud and 30 ft. of silty sand. Beneath this is a 20 ft. layer of very stiff upper Old Bay Clay, 10 ft. of clayey and silty sand and 40 ft. of very stiff lower Old Bay Clay and about 80 ft. of very dense clayey sand and very stiff silty clay. Shale bedrock (Franciscan Formation) is located about 215 ft. below grade. Groundwater levels are expected to be about eight to ten ft. SFD./2/

Excavation for the project foundation and basement would be conducted to a depth of about nine ft. SFD. The existing basement is at about eight ft. SFD. The project would have a pile foundation; piles would be driven about 42 to 47 ft. into dense, load-bearing sands. Excavation depth would approach the groundwater level, and dewatering might be required, especially in the area of pile caps. Dewatering could produce some local subsidence, which could damage the streets or older buildings in the site's immediate vicinity. The project would include measures to mitigate this potential impact (see p. 26).

Pit walls would be shored up to prevent lateral movement during excavation. Adjacent structures might need to be underpinned, should excavation go below the base of their foundations, to avoid such damage as cracking of walls or foundations or sagging of floors. The building contractor must comply with the San Francisco Building Code and the Excavation Standards of the California Occupational Safety and Health Agency.

Bay mud is a low quality foundation support soil. To avoid building settlement and similar problems encountered when building on Bay mud, the project foundations would include use of piles driven to dense sands below the Bay mud to support the structures.

The closest active faults to San Francisco are the San Andreas Fault, about 9 miles southwest of Downtown, and the Hayward and Calaveras Faults, about 15 and 30 miles east of Downtown, respectively. The project area would experience Violent (Intensity Level B, fairly general collapse of brick and frame structures when not unusually strong, serious cracking of better buildings, lateral displacement of streets, bending of rails and ground fissuring) groundshaking during a major earthquake./3/ The site is within an area of liquefaction or subsidence./4/ It is not within an area of potential tsunami or seiche flooding./5/

The project sponsor would follow the recommendations of structural and foundation reports to be prepared for the project for any excavation and construction on the site. The building must meet current seismic engineering standards of the San Francisco Building Code which include earthquake-resistant design and materials. The Code is designed to allow for some structural damage to buildings but not collapse during a major earthquake (see also Mitigation Measures, p. 26, for the project's emergency response plan).

The project would not have a substantial effect on geology or topography, and this topic will not be discussed in the project EIR.

NOTES - Geology/Topography

/1/ San Francisco Datum establishes the City's "0" point for surveying purposes at approximately 8.6 ft. above mean sea level.

/2/ Preliminary Geotechnical Study for 225 Pine Street, Harding Lawson Associates, August 24, 1984. This report is available for review at the Office of Environmental Review, 450 McAllister St., San Francisco, CA 94102.

/3/ URS/John A. Blume and Associates, San Francisco Seismic Safety Investigation, 1974. Groundshaking intensities that would result from a major earthquake were projected and classified on a five-point scale ranging from E (Weak) through A (Very Violent).

/4/ Liquefaction is the transformation of granular material, such as loose, wet sand, into a fluid-like state similar to quicksand. Subsidence is a lowering of the ground surface from settlement of fill or alluvium. This can occur from groundshaking, withdrawal of groundwater, or other causes.

/6/ A.W. Garcia and J.R. Houston, Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound, Federal Insurance Administration, Department of Housing and Urban Development, November 1975. Maximum flood elevations for earthquake-induced tsunamis have been estimated to be about elevation -3.5 ft. for a 100-year event and 0.5 ft. for a 500-year event (elevations from San Francisco Datum, 8.64 ft. above mean sea level), both of which would be below site grade.

	Yes	No	Discussed
10. Water. Could the project:			
*a. Substantially degrade water quality, or contaminate a public water supply?	___	X	X
*b. Substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge?	___	X	X
*c. Cause substantial flooding, erosion or siltation?	___	X	___

As discussed above, excavation depth would approach the groundwater level, and dewatering may be required, especially in the area of pile caps. Dewatering could produce some localized subsidence which could damage streets or older buildings in the immediate site vicinity. The sponsor has agreed to measures to mitigate effects of dewatering (see p. 26). Site runoff would drain into the City's combined sanitary and storm sewage system. The project would not affect drainage patterns or water quality because the site is now entirely covered with impermeable surfaces. This topic will not be discussed in the EIR.

	Yes	No	Discussed
11. Energy/Natural Resources. Could the project:			
*a. Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	___	X	X

	YES	NO	DICUSSED
b. Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	___	X	X

Annual electric energy consumption by the existing parking garage on the site is unknown.

Removal of existing structures would require an unknown amount of energy. Fabrication and transportation of building materials, worker transportation, site development, and building construction would require about 250 billion Btu at the source/1,2/ of gasoline, diesel fuel, natural gas and electricity./3/ Distributed over the estimated 50-year life of the project, this would be about five billion Btu per year, or about 20% of annual building energy requirements.

New buildings in San Francisco are required to conform to energy conservation standards specified by Title 24 of the California Administrative Code. Documentation showing compliance with these standards is submitted with the application for the building permit and is enforced by the Bureau of Building Inspection.

Table 1, p. 19, shows the estimated operational energy which would be used by the project. Project demand for electricity during PG&E's peak electrical load periods, July and August afternoons, would be about 1,030 kW, an estimated 0.006% of PG&E's peak load of about 16,000 MW./4/ Project demand for natural gas during PG&E's peak natural gas load periods, January mornings, would be 9.4 million Btu per day, or about 0.2% of PG&E's peak load of about 3.7 billion Btu per day./4/ Annual and peak daily electricity and natural gas consumption are shown in Figures 3 and 4, pp. 20 and 21. Measures to reduce energy consumption are included as part of the project (see p. 27).

Project-related transportation would cause additional, off-site energy consumption. Project-related trips would require about 58,000 gallons of gasoline and diesel fuel and about 0.5 million kWh of electricity annually. The total annual transportation energy demand, converted with at-source factors to a common thermal energy unit, would be about 13.3 billion Btu. This projected use is based upon the mix of highway vehicles in California in 1987. Per vehicle fuel use is expected to decrease during the next few years as the vehicle fleet becomes more efficient and fuel more expensive.

TABLE 1: ESTIMATED PROJECT ENERGY USE

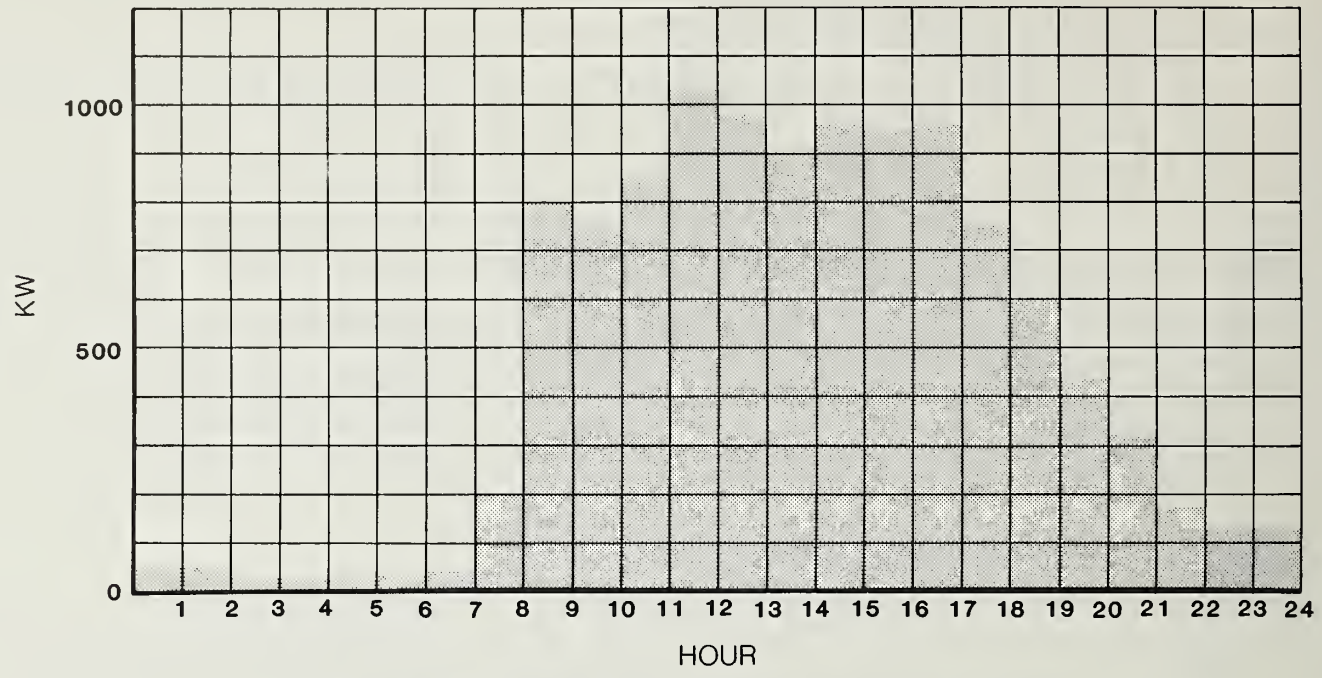
Allowable Energy Budget Under Title 24	
Total annual BTU/a/ per square foot of office space	126,000 Btu/sq. ft.
Total annual BTU per square foot of retail space	200,000 Btu/sq. ft.
Monthly Natural Gas Consumption/b/	
Estimated monthly natural gas consumption per square foot	540 Btu/sq. ft.
Estimated total monthly natural gas consumption	80,500 cu ft. (90 million Btu)/month
Estimated peak hourly natural gas consumption	2,060 cu. ft./hr.
Monthly Electrical Consumption/b/	
Estimated monthly electrical consumption per square foot	1.2 kwh (12,286 Btu)/sq. ft
Estimated total monthly electrical consumption	188,400 kWh (1.9 billion Btu)
Estimated peak hourly electrical consumption	1,020 kWh
Annual Consumption	
Estimated total annual natural gas consumption	960,000 cu. ft. (1.1 billion Btu)
Estimated total annual electrical consumption	2.3 million kWh (24 billion Btu)
Connected kilowatt load	1,030 kW
Estimated total annual energy consumption	25.1 billion Btu (4,480 barrels of oil)

/a/ Btu (British thermal unit): A standard unit for measuring heat. Technically, it is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit (251.97 calories) at sea level.

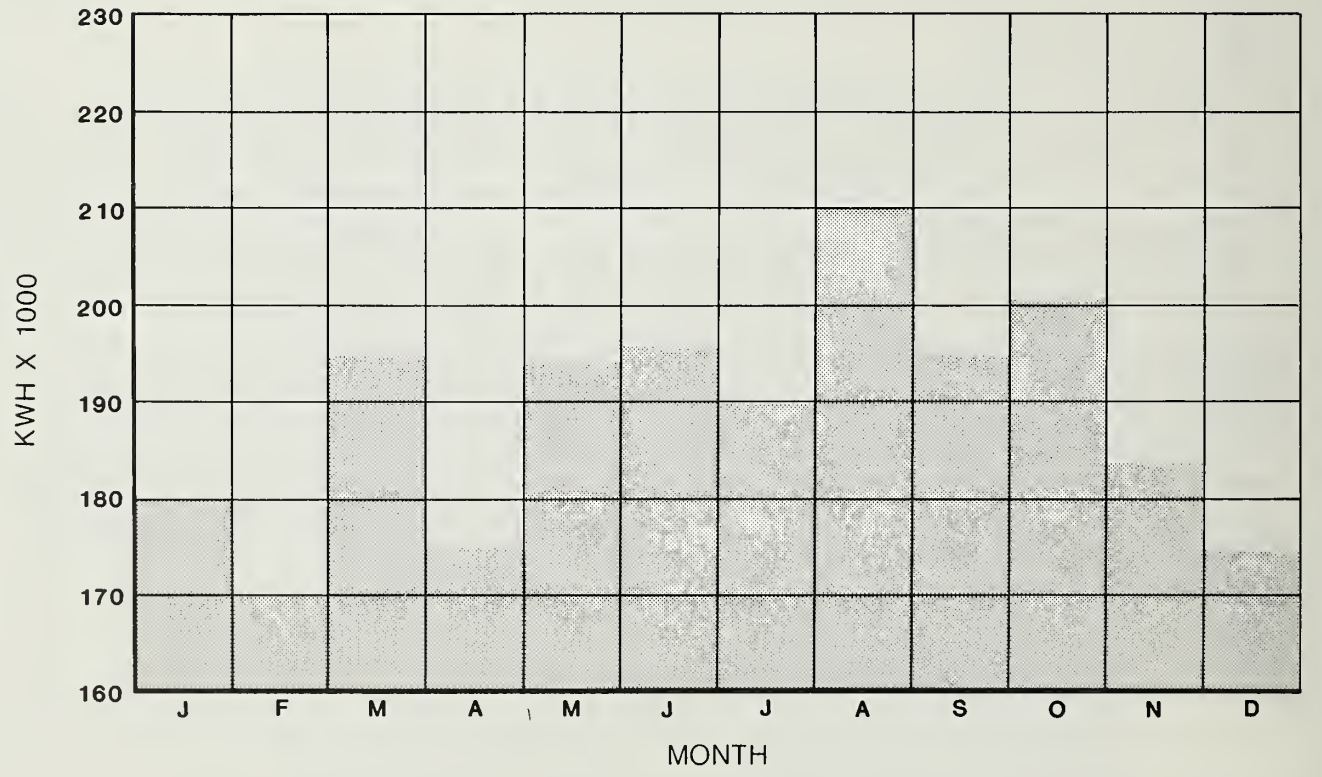
/b/ Electrical and natural gas consumption were calculated for the project by Skidmore Owings & Merrill, San Francisco. These calculations are available for review at the Office of Environmental Review, Department of City Planning, 450 McAllister St., 6th Floor, San Francisco, California.

NOTE: Energy Conversion Factors:
one gallon gasoline = 140,000 Btu
one kilowatt hour (kWh) = 10,239 Btu, assuming operational efficiency of 33% for fossil or nuclear-fueled power plant
one therm = 100,000 Btu
one cubic foot of natural gas = 1,100 Btu at source
one barrel of oil = 5.6 million Btu

SOURCE: Skidmore Owings & Merrill; ESA, Inc.; and Department of City Planning.



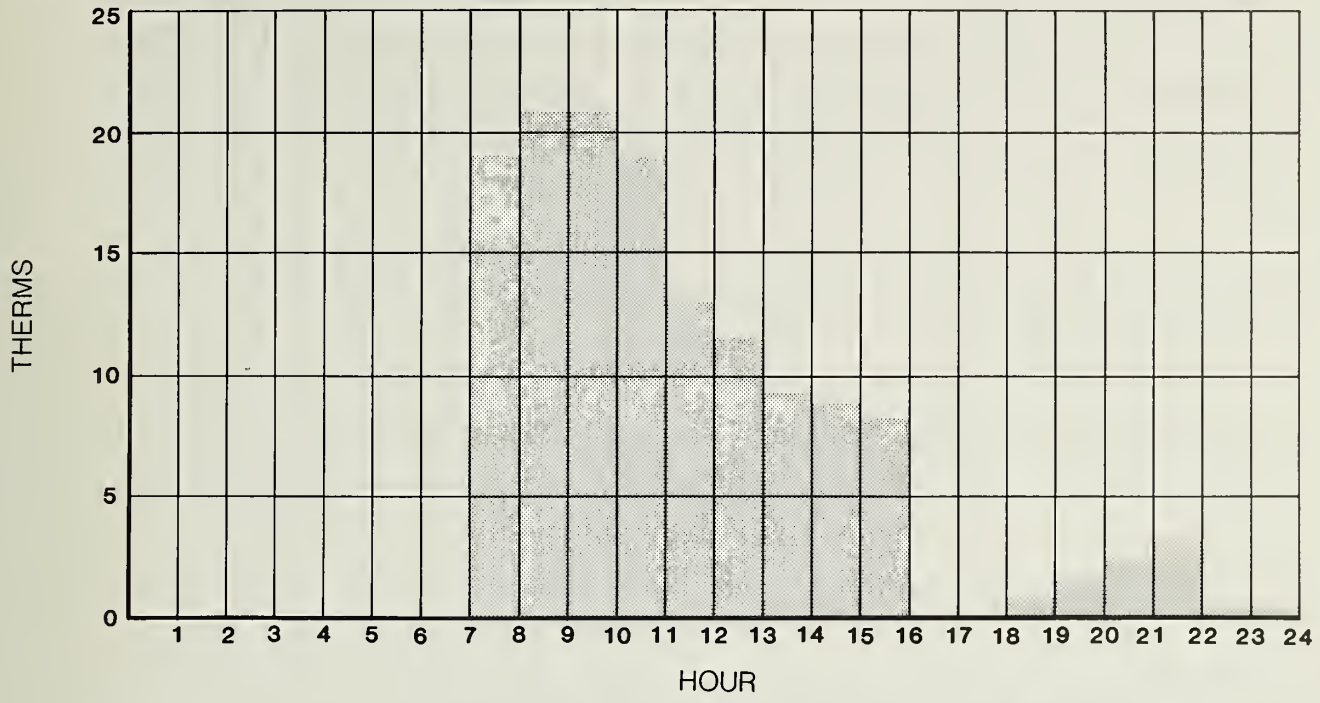
PEAK DAY ELECTRICAL DEMAND BY HOUR (SUMMER)



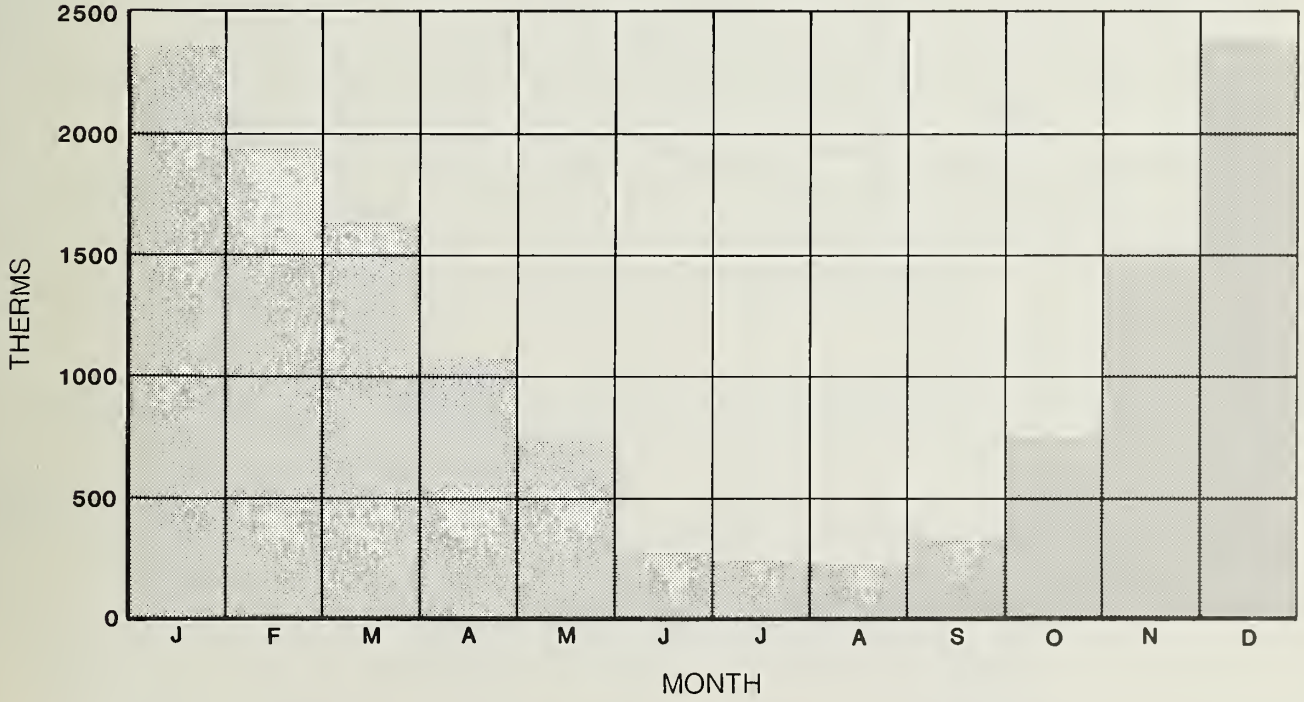
ANNUAL CONSUMPTION OF ELECTRICITY BY MONTH

FIGURE 3
235 PINE
PROJECTED ELECTRICITY CONSUMPTION

SOURCE: SKIDMORE, OWINGS & MERRILL



PEAK DAY NATURAL GAS DEMAND BY HOUR (WINTER)



ANNUAL CONSUMPTION OF NATURAL GAS BY MONTH

FIGURE 4
235 PINE
PROJECTED NATURAL GAS CONSUMPTION

SOURCE: SKIDMORE, OWINGS & MERRILL

The Downtown Plan EIR concluded that energy consumption resulting from development in the C-3 districts under the Downtown Plan would not be significant and that conclusion remains valid for the future and project conditions. The Downtown Plan EIR (EE81.3, Final EIR certified October 18, 1984) may be examined at the Department of City Planning, 450 McAllister St., 6th Floor; the San Francisco Main Library and various branch libraries.

This topic, energy impacts, requires no further analysis and will not be discussed in the EIR.

Average water use is projected to be 9,150 gallons per day. This demand could be accommodated by existing supplies. This topic will not be discussed in the EIR.

NOTES - Energy

/1/ At-source thermal energy, given in British thermal units (Btu) is based on information received from PG&E, Technical Service Department, May 10, 1984.

/2/ The British thermal unit (Btu) is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at sea level; all references to Btu in this report are "at-source" values. The term "at-source" means that adjustments have been made in the calculation of the thermal energy equivalent (Btu) for losses in energy that occur during generation, transmission, and distribution of the various energy forms, as specified in: ERCDC, 1977, Energy Conservation Design Manual for New Non-Residential Buildings, Energy Conservation and Development Commission, Sacramento, California, and Apostolos, J.A., W.R. Shoemaker, and E.C. Shirley, 1978, Energy and Transportation Systems, California Department of Transportation, Sacramento, California, Project #20-7, Task 8.

/3/ Hannon, B., et al., 1978, "Energy and Labor in the Construction Sector," Science 202:837-847.

/4/ San Francisco Department of City Planning, Downtown Plan EIR (EE81.3), certified October 18, 1984, Vol. 1, pp. IV.G.3-4.

	Yes	No	Discussed
12. Hazards. Could the project:			
*a. Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	___	X	___
*b. Interfere with emergency response plans or emergency evacuation plans?	___	X	X
c. Create a potentially substantial fire hazard?	___	X	X

The project would increase the daytime population in downtown San Francisco. Employees in the proposed building would contribute to congestion if an

emergency evacuation of the downtown area were required. An evacuation and emergency response plan would be developed as part of the proposed project (see p. 27). The project's emergency plan would be coordinated with the City's emergency planning activities. This mitigation measure is proposed as part of the project; thus this topic will not be discussed in the EIR.

The increased number of persons using the site would not substantially increase the fire hazard at the site as the project would conform to the Life Safety provisions of the San Francisco Building Code, and Title 24 of the State Building Code. The Fire Department has determined that no additional fire stations would be needed to serve cumulative development until the most major proposals came on line (such as Rincon Point/South Beach and Mission Bay (Edward Phipps, Assistant Chief, Support Services, Letter July 9, 1984.) Therefore, it is not anticipated that the project would create a substantial fire hazard and this issue will not be discussed in the EIR.

	Yes	No	Discussed
13. Cultural. Could the project:			
*a. Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study?	X		X
*b. Conflict with established recreational, educational, religious or scientific uses of the area?		X	
c. Conflict with the preservation of buildings subject to the provisions of Article 10 or (proposed) Article 11 of the City Planning Code?		X	X

Archival research was conducted regarding the possibility of encountering artifacts on the site./1/ The project site was located along the San Francisco waterfront during 1849; archival research indicates that it is unlikely that the remains of a ship would be found on the site. Archaeological remains from the Gold Rush period could exist on the site. Such a find could be considered of potential archaeological and historic significance. Cultural resources will be discussed in the EIR.

The project site is currently occupied by a three-story concrete garage (not rated as architecurally significant in the Downtown Plan); this building would be demolished. The project block includes four buildings designated as Category I, Retain Essentially Intact, in the Downtown Plan. Category I buildings are defined as of the highest architectural and environmental

importance. The Pine-Sansome Conservation District identified in Article 11 of the City Planning Code, is located west of the project site, and encompasses the building at the northeast corner of the Pine/Sansome intersection across Pine St., northwest of the project, and buildings west of Sansome St., from mid-block between California and Pine Sts. to mid-block between Pine and Bush Sts. (see Figure 1, p. 2). The Conservation District extends west to within one lot of Montgomery St. According to Article 11, the buildings in the Pine-Sansome Conservation District generally have a high design quality and they essentially compose an entire pre-World War II streetscape.

The project would not directly affect any architectural resources; this subject will not be discussed in the EIR.

NOTE - Cultural

/1/ An archival search was conducted for the project by Allen Pastron, Ph.D., in November 1984; the resulting cultural resources report is on file and available for public review at the Office of Environmental Review, Department of City Planning 450 McAllister St., San Francisco.

	Yes	No	Discussed
C. OTHER			
Require approval of permits from City Departments other than Department of City Planning or Bureau of Building Inspection, or from Regional, State or Federal Agencies?	___	X	___

	Yes	No	N/A	Discussed
D. MITIGATION MEASURES				
1. If any significant effects have been identified, are there ways to mitigate them?	X	___	___	X
2. Are all mitigation measures identified above included in the project?	___	X	___	X

The following are mitigation measures related to topics determined to require no further analysis in the EIR. The EIR will contain a mitigation chapter describing these measures and also including other measures which would be, or could be, adopted to reduce potential adverse effects of the project as identified in the EIR.

Visual Quality

- In order to reduce obtrusive light or glare, the project sponsor would use no mirrored glass on the building.

Operational Noise

- As recommended by the Environmental Protection Element of the San Francisco Master Plan, an analysis of noise reduction measurements would be prepared by the project sponsor and recommended noise insulation features would be included as part of the proposed building. For example, such design features would include fixed windows and climate control.

Construction Noise

- The project sponsor would require the project contractor to muffle and shield intakes and exhaust, shroud or shield impact tools, and use electric-powered, rather than diesel-powered, construction equipment, as feasible, so that noise would not exceed limits stated in the City's Noise Ordinance (Article 29, San Francisco Administrative Code, 1972).

- The project sponsor would require the general contractor to construct barriers around the site and stationary equipment such as compressors, which would reduce construction noise by as much as five dBA, and to locate stationary equipment in pit areas or excavated areas as these areas would serve as noise barriers.

- The project sponsor would require that the construction contractor predrill holes for piles, in order to minimize noise and vibration from piledriving. The actual pounding from piledriving would occur during a five- to eight- minute span per pile. The project sponsor has agreed to limit piledriving to the hours resulting in the least disturbance to the greatest number of neighboring uses. For nighttime pile driving, this would require a work permit from the Director of Public Works, pursuant to San Francisco Noise Ordinance Section 2907(c). The project sponsor would schedule piledriving so as to disturb the fewest people.

Construction Air Quality

- The project sponsor would require the general contractor to sprinkle demolition sites with water continually during demolition activity; sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50%; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soil, sand, or other such material; and sweep streets surrounding demolition and construction sites at least once per day to reduce TSP emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants, by such means as a prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of a construction period.

Geology/Topography

- A detailed foundation and structural design study would be conducted for the building by a California-licensed structural engineer and a geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design and construction of the project.

- If dewatering were necessary, any groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to reduce the amount of sediment entering the stormdrain/sewer lines.

- Should dewatering be necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the soils report would contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the project sponsor to perform this

monitoring. Groundwater observation wells would be installed to monitor the level of the water table and other instruments would be used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. Costs for the survey and any necessary repairs to service under the street would be borne by the contractor.

Energy

- The project would be more energy efficient than required by State Administrative Code Title 24. To conserve electric energy, the project would include multiple light-switching; a variable air volume air conditioning system; and an outside-air / return-air economizer cycle. A carbon monoxide monitoring system would control garage ventilation, to avoid unnecessary operation of fans.

- Natural gas would be used for space heating.

Hazards

- An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance by the Department of Public Works of final building permits.

- To expedite implementation of the City's emergency response plan, the project sponsor would prominently post information for building occupants concerning what to do in the event of a disaster.

E. MANDATORY FINDINGS OF SIGNIFICANCE

	YES	NO	DISCUSSED
*1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history?	___	X	___
*2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	___	X	___
*3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	X	___	X
*4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	___	X	___
*5. Is there a serious public controversy concerning the possible environmental effect of the project?	___	X	___

The project would contribute to cumulative effects in the areas of transportation and air quality. The EIR will incorporate by reference the analyses for air quality and transportation contained in the Downtown Plan EIR. Those analyses remain current for future and project conditions.

F. DETERMINATION THAT A TIERED EIR IS REQUIRED

In light of the discussion in this Initial Study a tiered EIR is required for this project pursuant to the requirements of Section 21094(b) as follows:

1. The project would be consistent with the Downtown Plan, policies and ordinances for which a Final EIR (EE 81.3) was certified October 18, 1984;

2. The project would be consistent with applicable local land use plans and zoning pursuant to the Downtown Plan and Planning Code, with allowable exceptions; and,

3. Section 21166 does not apply.

G. ON THE BASIS OF THIS INITIAL STUDY:

____ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

____ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers ____ in the discussion, have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

__X__ I find that the proposed project MAY have a significant effect on the environment, and a tiered ENVIRONMENTAL IMPACT REPORT is required.

Barbara W. Sahm

Barbara W. Sahm
Environmental Review Officer

for

Dean L. Macris
Director of Planning

Date: 12/26/85

FEDERAL AND STATE AGENCIES

Northwest Information Center
California Archaeological Inventory

California Department of Transportation
Public Transportation Branch

REGIONAL AGENCIES

Bay Area Air Quality Management
District

CITY AND COUNTY OF SAN FRANCISCO

Bureau of Building Inspection

City Attorney's Office

Landmarks Preservation Advisory Board

Mayor's Economic Development Council

Public Utilities Commission

Public Utilities Commission
Bureau of Energy Conservation

Recreation & Park Department

San Francisco Bureau of Engineering

San Francisco Department of
Public Works
Bureau of Engineering

San Francisco Department of
Public Works
Mechanical Engineering Section

San Francisco Department of
Public Works
Traffic Engineering Division

San Francisco Fire Department

San Francisco Municipal Railway

San Francisco Real Estate Department

Water Department

GROUPS AND INDIVIDUALS

AIA San Francisco Chapter

Bay Area Council

Bendix Environmental Research, Inc.

Tony Blaczek
Finance Department Coldwell Banker

Dalum Corporation
c/o Midway Trading Co.

Michael V. Dyett
Blayney-Dyett

Environmental Impact Planning
Cathleen Galloway Brown

Friends of the Earth
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The Foundation for San Francisco's
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Mark Ryser

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Bruce Marshall
San Francisco Muni Coalition

Planning Analysis & Development
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San Francisco Convention &
Visitors Bureau
George D. Kirkland
Executive Director

San Francisco Planning &
Urban Research Association

San Francisco Forward
Harriet B. Levy

San Francisco Tomorrow
Tony Kilroy

Sierra Club
Becky Evans

Tenants and Owners Development Corp.
John Elberling

Calvin Welch
Council of Community Housing
Organizations

MEDIA

Annette M. Granucci
Commercial News Publishing Co.

San Francisco Bay Guardian
Patrick Douglas, City Editor

San Francisco Business Journal
Kirstin E. Downey

San Francisco Chronicle
Evelyn Hsu

San Francisco Examiner
Gerald Adams

San Francisco Progress
E. Cahill Maloney

The Sun Reporter

Tenderloin Times
Rob Waters

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Faith Van Liere

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and Harry Watkins

PROJECT SPONSOR

London & Edinburgh Trust
Charles Graham

PROJECT ARCHITECT

Skidmore, Owings & Merrill
Steve O'Brien

PROJECT ATTORNEY

Morrison & Foerster
Zane Gresham

APPENDIX B: WIND STUDY METHODOLOGY

This summary of wind study methodology is based on studies by Bruce R. White, Ph.D., Associate Professor of Mechanical Engineering at the University of California, Davis. The studies are independent of the University. These reports are available for review at the Department of City Planning, Office of Environmental Review, 450 McAllister St.

INTRODUCTION

Wind tunnel tests were conducted for winds in the project vicinity in its existing condition, and with the project, in relation to the Downtown Plan wind performance criteria (adopted by the City Planning Commission, November 29, 1984). Wind tunnel measurements were used to predict equivalent mean wind speeds/1/ near the project site. These mean wind speeds were compared to comfort criteria of 11 mph for pedestrian areas and seven mph for sitting areas.

A 1 inch = 50 feet scale model of the downtown San Francisco area surrounding the proposed building for several blocks in all directions was provided by Environmental Science Associates, Inc. The model tested two configurations: existing; project plus existing. All existing and approved development and buildings that are under construction in the project area were included in the model.

The model was tested in a wind tunnel that allows testing of natural atmospheric boundary layer flows past surface objects such as buildings and other structures. The tunnel has an overall length of 22 meters (m) (72 feet), a test section of 1.22 m (4 feet) wide by 1.83 m (6 feet) high, and an adjustable false ceiling. The adjustable ceiling and turbulence generators allow speeds within the tunnel to vary from 1 to 4 meters per second (m/s) or 4.8 to 19.3 miles per hour (mph).

The wind tunnel study was divided into two parts: flow visualization and wind-speed measurements. The flow visualization observations were performed by injecting a continuous stream of smoke at various near-surface locations. The subsequent motion of the smoke was recorded, and prevailing wind directions were determined. Wind-speed measurements were made with a hot-wire anemometer, an instrument that directly relates rates of heat transfer to wind speeds by electronic signals. The hot-wire signals are proportional to the magnitude and steadiness of the wind. Both the mean wind speeds and corresponding turbulence intensities were measured. Thus, high wind speeds and gustiness (changes in wind speeds over short periods of time) could be detected. Hot-wire measurements made close to the surface have an inherent uncertainty of $\pm$ 5% of the true values. The ratio of near-surface speed to reference wind speed was calculated from the hot-wire measurements.

Sixteen test locations were studied for three prevailing wind directions (northwesterly, west-northwesterly, and westerly) for the four configurations. These wind conditions are the most common in San Francisco, and are therefore the most representative for evaluation purposes. All hot-wire measurements were taken at the same series of surface points around the building site for the three wind directions and the two cases.

Methodology and Assumptions

The wind ordinance associated with the Downtown Plan (Section 148) is defined in terms of equivalent wind speed. This term denotes a one-hour average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence.

The mean wind speeds at street level were determined by a wind tunnel test, and a comparison of the test results with statistically representative records of wind data collected atop the Old Federal Building. Data describing the speed, direction and frequency of occurrence of winds were gathered at the old San Francisco Federal Building, at 50 United Nations Plaza, during the six-year period 1945 to 1950. Hourly measurements have been tabulated for each month (averaged over the six years) in three-hour periods using seven classes of wind speed and 16 compass directions. Analysis of these data shows that during the hours from 6:00 a.m. to 8:00 p.m., about 62% of the winds blow from three of the 16 directions, as follows: Northwest (NW), 10%; West Northwest (WNW), 14%; West (W), 35%; and, all other winds, 36%; calm conditions occur 2% of the time.

Each wind tunnel test measurement results in a ratio that relates the speed of ground-level wind to the speed at the reference elevation, in this case the height of the old San Francisco Federal Building. The wind that is measured is an equivalent wind speed value which is adjusted to include the level of gustiness or turbulence present.

The frequency with which a particular wind velocity is exceeded at any test location is then calculated by using the measured wind tunnel ratios and a specified ground speed to determine the corresponding reference wind speed for each direction. In general, this gives different reference speeds for each direction (NW, WNW, W, WSW, and Other). The wind data for San Francisco are then used to calculate the percentage of the time each reference speed would be exceeded. The sum of these is the total percentage of time that the specified ground-level wind speed is exceeded. A computer is used to calculate the total percentages for a series of wind speeds until the speed corresponding to the speed exceeded 10% of the time is found. Throughout the following discussion, the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time.

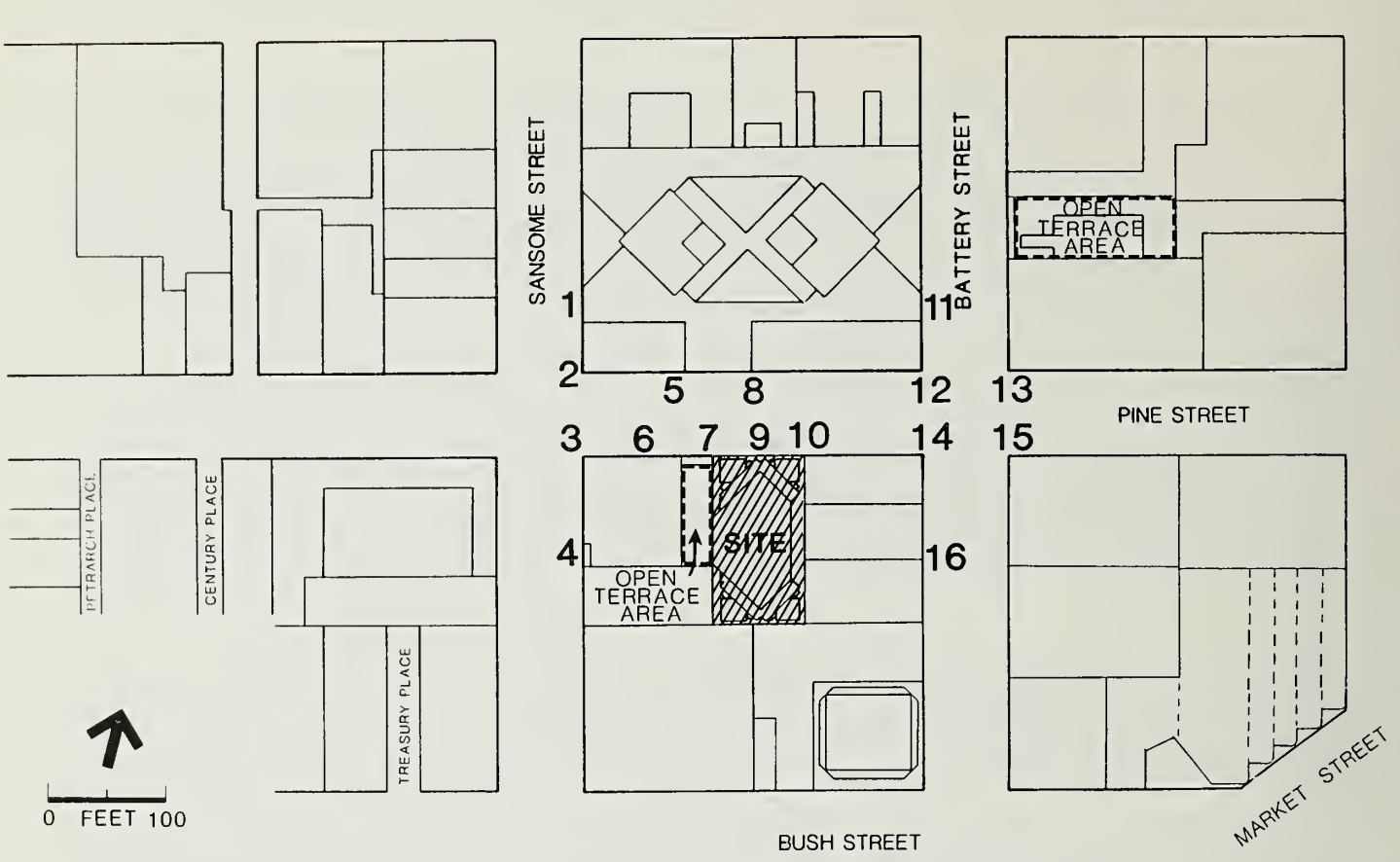
Study Results

The results of the wind tunnel study are summarized in Figure B-1, together with the locations of the measurement points.

The project would cause wind speeds to increase at six of the 16 test locations, to remain the same at four locations, and to decrease at six locations. Winds would meet the 11 mph comfort criterion at all locations.

NOTE - Wind Study Methodology

/1/ Equivalent mean wind speed is defined as the mean wind, multiplied by the quantity (1 plus 3 times the turbulence intensity) divided by 1.45.



PEDESTRIAN-LEVEL WIND SPEEDS (MPH) EXCEEDED 10% OF THE TIME
235 PINE STREET

This table shows the wind speeds (mph) exceeded at pedestrian-level for 10% of the time. The locations are shown above. The comfort criteria established in section 148 of the Downtown Plan are 11 mph for pedestrian areas and seven mph for public seating areas.

LOCATION	EXISTING	PROPOSED
no. 1	6	5
no. 2	7	6
no. 3	7	5
no. 4	6	5
no. 5	7	6
no. 6	8	6
no. 7	6	8
no. 8	5	9
no. 9	7	7
no. 10	7	7
no. 11	5	6
no. 12	7	7
no. 13	8	8
no. 14	6	8
no. 15	5	7
no. 16	6	7

SOURCE: BRUCE WHITE, PhD.

FIGURE B-1
EQUIVALENT WIND SPEEDS AT SIXTEEN SURFACE LOCATIONS IN THE PROJECT VICINITY

APPENDIX C: TRANSPORTATION

TABLE C-1: PASSENGER LEVELS OF SERVICE ON BUS TRANSIT

Level of Service	Description	Passengers per Seat
A	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with fewer than half the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00–0.50
B	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading times do not affect scheduled operations.	0.51–0.75
C	Level of Service C is still in the zone of passenger comfort, but loadings approach seated capacity and passenger maneuverability on the transit vehicle is beginning to be restricted. Relatively satisfactory operating schedules are still obtained as passenger loading times are not excessive.	0.76–1.00
D	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to affect schedule adherence, as the restricted freedom of movement for passengers requires longer loading times.	1.01–1.25
E	Level of Service E passenger loadings approach manufacturers' recommended maximums and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loading times increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level. Bunching of buses tends to occur, which can rapidly cause operations to deteriorate.	1.26–1.50
F	Level of Service F describes crush loadings. Passenger comfort and maneuverability are extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially increased loading times.	1.51–1.60

SOURCE: Environmental Science Associates, Inc. from information in the Interim Materials on Highway Capacity, Transportation Research Circular 212, pp. 73–113, Transportation Research Board, 1980.

M OCEAN VIEW - CIVIC CENTER STATION
Wednesday, September 9, 1981 - 8:20 A.M. - Inbound

L TARAVAL - VAN NESS STATION
Wednesday, September 16, 1981 - 4:50 P.M. - Outbound

14 MISSION - MISSION STREET AND SOUTH VAN NESS AVE
Tuesday, September 29, 1981 - 5:45 P.M. - Outbound

N JUDAH - DUBOCE AND CHURCH
Wednesday, June 8, 1983 - 8:00 A.M. - Inbound

FIGURE C-1
PHOTOS OF MUNI PEAK LOADING CONDITIONS

SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES, INC.

K INGLESIDE - VAN NESS STATION
Wednesday, September 9, 1981 - 8:00 A.M. - Inbound

N JUDAH - VAN NESS STATION
Wednesday, September 16, 1981 - 5:00 P.M.--Outbound

38 GEARY - VAN NESS AVE. AND O'FARRELL ST.
Wednesday, October 21, 1981 - 9:00 A.M. - Inbound

38 GEARY - VAN NESS AVE. AND GEARY BLVD.
Wednesday, October 21, 1981 - 4:20 P.M. - Outbound

FIGURE C-1(CONTINUED)
PHOTOS OF MUNI PEAK LOADING CONDITIONS

SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES, INC.

30X MARINA EXPRESS - BAYSHORE AVE. AND ARLETA AVE.
Wednesday, October 7, 1981 - 8:00 A.M. - Inbound

J CHURCH - CHURCH ST. AND DUBOCE AVE.
Tuesday, September 29, 1981 - 9:00 A.M. - Inbound

SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES, INC.

FIGURE C-1(CONTINUED)
PHOTOS OF MUNI PEAK LOADING CONDITIONS

PEDESTRIAN ANALYSIS

The pedestrian analysis has been conducted following methods developed by Pushkarev and Zupan in Urban Space for Pedestrians (MIT Press, 1975). Table C-1 shows the relationship between pedestrian flow rates and the flow regimes (categories) used to describe levels of operation. Figure C-2 shows photographs of pedestrian conditions that correspond to the flow regimes.

TABLE C-2: PEDESTRIAN FLOW REGIMEN

Flow Regime/a/	Choice	Conflicts	Flow Rate (p/f/m)/b/
Open	Free Selection	None	less than 0.5
Unimpeded	Some Selection	Minor	0.5 to 2.0
Impeded	Some Selection	High Indirect Interaction	2.1 to 6.0
Constrained	Some Restriction	Multiple	6.1 to 10.0
Crowded	Restricted	High Probability	10.1 to 14.0
	Design Limit - Upper Limit of Desirable Flow		
Congested	All Reduced	Frequent	14.1 to 18.0
Jammed	Shuffle Only	Unavoidable	Not applicable/c/

/a/ Photographs of these conditions are shown in Figure C-2.
/b/ P/F/M = Pedestrians per foot of effective sidewalk width per minute.
/c/ For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

SOURCE: Urban Space for Pedestrians, MIT Press, 1975, Cambridge, MA.

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m^2). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely uncomfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlivek.

The threshold of CONGESTED FLOW. The first eleven people in the view have about 16 sq ft (1.5 m^2) per person, corresponding to a flow rate of about 15 people per min per ft (49 per m) of walkway width. The beginnings of congestion are evident in bodily conflicts affecting at least three of the walkers, and in blocked opportunities for walking at a normal pace.

The onset of CROWDED FLOW, with an average of about 24 sq ft (2.2 m^2) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.

The midpoint of the CONSTRAINED FLOW range, with about 30 sq ft (2.8 m^2) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

SOURCE: PUSHKAREV and ZUPAN

FIGURE C-2
PHOTOS OF PEDESTRIAN FLOW LEVELS

The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m^2) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.

The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza -which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture have almost 130 sq ft (12 m^2) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m^2). Thus, indirect interaction with others is still quite frequent in the upper range of UNIMPEDED FLOW.

The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m^2) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.

Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m^2) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

SOURCE: PUSHKAREV and ZUPAN

FIGURE C-2 (CONTINUED)
PHOTOS OF PEDESTRIAN FLOW LEVELS

INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made used the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. This method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table C-3). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio calculated by dividing the existing volume by the capacity at Level of Service E.

PARKING SURVEY ANALYSIS OF EXISTING 235 PINE STREET GARAGE

Environmental Science Associates conducted a survey of the existing 235 Pine Street garage, to determine the number of parking spaces used for long- and for short-term parking. Long-term parking is identified by the Department of City Planning as any vehicle remaining in a parking space for four hours or more, short-term parking is for less than four hours.

The rate structure for the existing garage is:

1) short-term: $1.50/half hour and every one-half hour up to a maximum of $12.00 per day.

2) monthly: $230/month. The existing monthly contracts were in effect when the developer purchased the site; there are no new monthly contracts./1/

The survey was conducted by ESA on Tuesday, January 14, 1986, between the hours of about 9:30 a.m. and 4:30 p.m., a total of seven hours. A total of 217 spaces were noted in the garage, and each space was surveyed about once every hour. License plates were noted each time a space was surveyed to determine if the space was occupied by the same or a different car at each consecutive hour. (Raw survey data is on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St.)

During the survey period, a total of 150 spaces were used for long-term parking (four or more hours) and a total of 67 spaces were used for short-term parking (less than four hours). The parking turnover rate per hour, averaged over the seven hour period was 0.23, meaning that 23% of the spaces turned over once an hour.

NOTE

/1/ Ian B. Paget, Patson Development Company, letter, January 13, 1986.

TABLE C-3: VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS

Level of Service	Description	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting upstream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.01+

/a/ Capacity is defined as Level of Service E.

SOURCE: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering from Highway Capacity Manual, Highway Research Board, 1965

APPENDIX D: AIR QUALITY

APPENDIX D: SAN FRANCISCO AIR POLLUTANT SUMMARY, 1981-1984

STATION: 900 23rd Street, San Francisco

POLLUTANT:	STANDARD	1981	1982	1983	1984/i/
OZONE (O^3) (Oxidant)					
1-hour concentration, ppm/a/					
Highest hourly average 0.10 /b/	0.12 /c/	0.07	0.08	0.13	0.10
Number of excesses of state standard		0	0	1	1
Expected Annual Excess (federal)/d/		0.0	0.0	0.3	-
CARBON MONOXIDE (CO)					
1-hour concentration, ppm					
Highest hourly average	20 /b,e/	8	12	7	-
Number of excesses of standard		0	0	0	-
8-hour concentration, ppm					
Highest 8-hour average	9 /b,c/	5.3	9.1	5.1	10.8
Number of excesses of standard		0	1	0	1
TOTAL SUSPENDED PARTICULATE (TSP)					
24-hour concentration, ug/m^3/a/					
Highest 24-hour average	100 /b,f/	103	126	117	-
Number of excesses of standard/g/		1	3	4	-
Annual concentration, ug/m^3					
Annual Geometric Mean	60 /b,f/	56	57	55	60
Annual excess of standard		No	No	No	Yes
LEAD (Pb)					
30-day concentration, ug/m^3					
Highest 30-day average	1.5 /b/	0.6	0.7	0.4	-
Number of excesses of standard		0	0	0	-
NITROGEN DIOXIDE (NO_2)					
1-hour concentration, ppm					
Highest hourly average	0.25 /b/	0.11	0.13	0.13	0.14
Number of excesses of standard		0	0	0	0
SULFUR DIOXIDE (SO_2)					
24-hour concentration, ppm					
Highest 24-hour average	0.05 /b/	0.016	0.012	0.018	0.03
Number of excesses of standard/g,h/		0	0	0	0

/a/ ppm: parts per million. ug/m^3: micrograms per cubic meter.
/b/ State standard, not to be equaled or exceeded, except for CO standards, which are not to be exceeded.

(Continued)

APPENDIX D: SAN FRANCISCO AIR POLLUTANT SUMMARY 1981-1983 (Continued)

/c/ Federal standard, not to be exceeded more than once per year, except for annual standards, which are not to be exceeded.
/d/ Expected Annual Excess is a three-year average of annual excesses of the federal standard.
/e/ The state one-hour CO standard was revised from 35 ppm to 20 ppm in January 1983. The federal one-hour standard remains 35 ppm.
/f/ The California ARB has redefined the state particulate standard to apply to "inhalable" particulates only (i.e., those which have a diameter less than ten microns). The new standards are 50 ug/m^3 for 24-hour averages and 30 ug/m^3 for the annual geometric mean. No data is currently available on the particle size distribution of the TSP sampled at the San Francisco monitoring station.
/g/ Number of observed excess days (measurements taken once every six days).
/h/ Exceeding the SO_2 standard is a violation only if a concurrent excess of the state ozone or TSP standards occurs at the same station. Otherwise, the federal standard of 0.14 ppm applies.
/i/ 1981-1984 data collected at 900 23rd Street

SOURCE: BAAQMD, 1981 - 1983, Air Quality in the San Francisco Bay Area; and California ARB, 1981 - 1984, California Air Quality Data.